Qi 氣

2004

Annual Publication of the
Australian Chinese Medical Association (Vic.) Inc.

Editor: Siew-Khin (Happy) Tang

Co-Editor: Joanna Ding

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Qi ('chi') is the pinyin version of 氣 which is regarded as the life-force or pervasive vital energy which animates us.

The ACMAV logo depicts a Chinese dragon intertwined with the traditional serpent and staff.

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ACMAV Inc. was founded in 1985 as the Chinese Medical Society, with Dr Tom Tsiang as Foundation President; it became the ACMAV in 1987. The inaugural edition of the *Qi gazette* was published by Dr Joseph Cheung in 1991.

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Cover:

Drawing depicting children at play under the watchful eye of their mother.

醒獅戲階庭 "Lion dances in the forecourt
幼童齊喝采 Children are full of laughter
慈母倚欄看 Mothers lean out of the pavilion
大家共安享 Together they enjoy good health and peace"

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Editorial

This year marks a milestone for the Australian Chinese Medical Association of Victoria (ACMAV). A group of Chinese Medical professionals gathered together 30 years ago to exchange ideas and share social and family interests. Today such gatherings have resulted in the formation of similar Chinese Medical associations throughout Australia, all with a common goal - to foster friendship amongst various peoples of similar interest in our adopted country Australia.

In Victoria, another goal of the ACMAV is to participate in the delivery of health services to the community with an emphasis on the elderly Chinese. The ACMAV strives to recognise health issues in the Chinese population. An account of this journey in time is documented in the foreward written by our respected foundation member, Dr. Tom Tsiang.

From the activities of the ACMAV, one can appreciate the variety of interests of its members. This coming year a combined state and national conference will be held in Victoria. Continuing Educational seminars for members, health promotion to groups of elderly Chinese Australians and the contribution and participation in medical aid to small groups and districts in Third World countries will continue to play a major role in the activities of the Association. Many of these activities over the last year are well documented in this publication.

The theme chosen for this year is Women's Health and Paediatrics; however other interesting subjects are also included. Many learned colleagues have contributed articles of high standard, so that we may share in their knowledge and experiences. The fear of travel in the current climate of global insecurity has not dampened our spirit; many of our members travelled to distant countries, contributing their professional skills or taking much needed time off from routine practice to savour the scenic views and experience different cultures. Some of these adventures have been captured in photographs and vivid descriptions.

In this issue the role of women in the medical field is featured in two accounts of remarkable women who were pioneers of medicine in Victoria and in China. Hopfully this will inspire more members of the female gender to join the medical profession.

I hope that the contribution on culinary delights, and the journal reviews will whet the appetite (oral and cerebral) of our members and readers from interstate and overseas. Select articles from the " Editor's Desk" (reprinted with permission from the authors) may stimulate healthy discussion. It is hoped that readers will contribute letters following these thought-provoking articles.

The ACMAV Foundation provides financial support for Scientific and Research projects. We are proud to announce that the first recipient for the year 2000, our colleague Dr. Chee Hong Ng has completed a study titled "Response to medication (Sertraline) in Chinese and Caucasian patients" . His article is included in this issue.

As a group of Australian Chinese doctors, it is anticipated that our activities reflect the respect and friendship we have for people of diverse origin in Australia. We are also hopeful that other similar groups and associations of medical professionals join in our activities and share our common interests.

Siew-Khin (Happy) Tang

Foreword

This year we will celebrate the 30th Anniversary of the Australian Chinese Medical Association. As Confucius said "At 30 I stood up". He meant that at age of 30 he stood up and became independent and was able to think for himself and not be influenced by others. It was an important stage of his life. This year also marks an important milestone in our association. We have come a long way in the last 30 years. We have established ourselves amongst the medical profession as well as in the Chinese community. It is time to stand up and give thought to the direction we will take for the next 30 years. Perhaps it is worthwhile to think back to reasons for our original formation.

Towards the end of 1960 and in the early 1970's a number of Chinese doctors were thinking of forming a Chinese medical group. Informal, separate and unrelated meetings were held by different groups of people. But in general the common aim was to try to form a society or association where Chinese doctors could come together to promote friendship, share common interests and to enlarge a network among ourselves. In those days, the number of Chinese medical practitioners was not big and the majority were overseas graduates or overseas Chinese graduating in Australia but with very few connections dating back to secondary school education. As a result, most of them, particularly general practitioners, were scattered in isolation both professionally and socially. An organization with both social and professional functions would be very desirable indeed. In 1972 the first informal gathering of the interested group was called by Dr. Lim, a cardiologist, at the Royal Victorian Eye & Ear hospital. The overwhelming sentiment was in favor of such gatherings, but the attendees were reluctant to form a registered association. The main reason was that they felt that an ethnical group could cause some unfavourable reaction from the medical community. At the time, however, there was already a Jewish Medical Association in existence. The idea was therefore put on the back burner for the time being.

In 1973 the then Federal Government suggested importing overseas trained doctors under the pretext that many migrants were not well served by the medical profession due to language problems. The AMA in an endeavor to show the government that this was not so, was quietly encouraging doctors of various ethnic origin to gather together to show the Federal Government that their particular compatriots were well serviced by doctors within their own ethnic group. The ex AMA president, Dr. George Santoro, approached me and suggested that perhaps the Chinese doctors could do something. It was obviously a good opportunity to form our own group with the help of the AMA, as this would allay the fears of some of our colleagues mentioned earlier. After negotiations with the AMA, it was decided that the best way to do it was to form a Chinese Medical Society as a sub-section of the AMA Victorian branch. It would therefore be under the umbrella of the AMA with all its blessing.

The Chinese Medical Society was therefore formed and its first member was indeed Dr. George Santoro. The executives had an exciting time developing and promoting the aim of the society and its activities. It was a very successful year and membership increased rapidly. Functions were held, each one well attended and indeed doctors all over Victoria came to enjoy the excellent dinners and medical topics being discussed, while

grabbing the opportunity to get to know one another. After one year, the executives felt that the society had grown sufficiently and arrived at the stage where it was no longer necessary to be a sub-section of the Victorian AMA. Hence the Australian Chinese Medical Association in Victoria was born. However, due to some misunderstanding it was not incorporated as a national company. As a result, when the doctors in New South Wales established their Chinese medical association, they were able to incorporate it as ACMA and we had to have "Victoria" added and hence the Australian Chinese Medical Association of Victoria (ACMAV) was established.

Over the 30 years, ACMAV has steadily increased its membership and became well known in the medical profession as well as the Chinese community. It is pleasing to see more young graduates joining us and the executives are looking younger and more enthusiastic with each passing year. We now have our own building, although as yet not well utilized. It is also pleasing to see that more and more speakers are eminent specialists of Chinese background, a reflection of the growing status of Chinese doctors. On the other hand, the formula of activities in the last 30 years has not changed very much. It is still mainly dinner with speakers and little else. Frank Thien, our current president, said in one of the newsletters that an old member resigned, commenting that ACMAV has "lost its soul". It is a sobering remark. It makes one think, what indeed was the soul of ACMAV and what is so different now. Thirty years ago there was a yearning by doctors to come together to belong to a gathering where they can shrug off the professional and social isolation. Over the years, the association has fulfilled this purpose admirably. In the last few years, we have seen large increase in doctors of Chinese background in all disciplines of medicine. People no longer need this sort of function to fulfill what once was an important function of the association. It is time indeed to think again: "What is the future direction of the association and what should we do from now on without outside influence?" It is time for us to stand up, be independent and self-reliant, just as Confucius did more than 2000 years ago.

Let us all join together and celebrate a Happy 30th Anniversary, looking forward to a greater and brighter future.

Tom C.T. Tsiang

President's Report

2004 is a year when the ACMAV has consolidated the best elements of what we have as an organisation, but also embraced changes reflecting our growth and maturity. Our ongoing series of educational seminars has provided the latest in Continuing Medical Education, as well as opportunities for networking and professional interaction. We have also had a very successful Annual Conference which has been highly rated by participants and sponsors alike. These educational and professional interactive activities have been basic elements for the ACMAV's success as an organisation for the last 19 years, and will continue to be a feature. This will culminate in our 20th anniversary conference, in combination with the Australasian Council of Chinese Medical Associations (ACCMA) meeting in June 11-13th 2005. However, we must not rest on our laurels but be responsive to change. And change we must or remain stagnant and regressive.

A significant change is the move towards electronic communication. This will not only facilitate dissemination of information to our members, but also allow our committee and executive to be directly accessible and more responsive to the needs and suggestions of our members. We are also actively pursuing the redevelopment of ACMAV House. This is an aging asset, but has great potential, both commercially and in becoming the permanent headquarters of the ACMAV. We need visionary but wise and careful planning, along with discussion and debate amongst the membership on this issue.

Culturally, we are progressing along a change initiated by my predecessor, Benny Foo, to look outward, rather than inward in our activities. Our Community Service activities continue, with dissemination of health information to elderly Chinese citizens. We have also been involved in providing medical supplies and equipment to various overseas aid projects. The establishment of the charitable ACMAV Foundation will facilitate our efforts in this arena. However, for this change to be ingrained into the culture of the ACMAV, it is important that our general membership become a part of this activity. This can be through direct involvement or via fundraising. A major task of the Committee is to consider projects on which to focus our activities, and to encourage participation of our members.

None of the consolidation or management activities memtioned above could occur without the extraordinary and talented Committee I have had the privilege to serve with: Benny Foo, for his wise counsel and efforts in promoting overseas aid projects; Kevin Siu and Mee Yoke Ling, for their energetic organisational skills, Siew Keng Chan, for her exceptional behind-the-scenes organisation and attention to detail; Min Li Chong, for her staunch and ever-dependable support; Salena Ward and Jun Yang, for their indefatigable efforts and promotional activities amongst junior members; Lawrence Wu, for his special work in organising community talks; Theong Ho Low, for his excellent knowledge and skills in overseas medical aid, and in architectural redevelopment; Maggie Wong, for her wonderful contributions to planning, and skillful shepherding of funds; David Lam and Fiona Chan, for their IT/Computer skills and mastery of computing, the internet, and all things electronic. Lastly, special thanks have to go to Happy (Siew-Khin) Tang, who has taken on the challenge of being Qi editor, bringing this marvellous effort to fruition.

I wish you all peace and prosperity as we move from the Year of the Monkey towards the Year of the Rooster.

Frank Thien

ACMAV Committee 2004

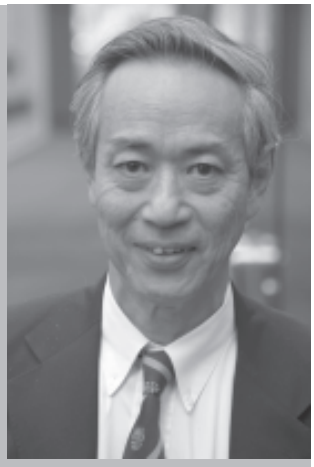
Dr Frank Thien
MD FRACP FCCP

PRESIDENT

Frank Thien is a physician in respiratory medicine and allergy, and clinical associate professor of medicine at Monash University. He practises and teaches at the Alfred and Box Hill Hospitals and is in private practice at Box Hill.

Mr Kevin Siu
MBBS FRACS

VICE-PRESIDENT



Kevin Siu was head of neurosurgery at the Alfred Hospital from 1988 to 2000. His present part-time appointment at the Royal Melbourne Hospital keeps him quite occupied as does his private practice. He was in the inaugural ACMAV committee of 1985 as secretary, and also served as president in 1988.

Dr David Lam
MBBS

SECRETARY

David Lam is an HMO at Monash Medical Centre currently training in anaesthetic.
He graduated in 2000 (Melb).
His work on ACMAV committee has included maintaining the ACMAV website, IT and manning the registration desk.

Dr Maggie Wong
MBBS FANZCA

TREASURER

Maggie Wong is an anaesthetist who works mainly in the public sector with appointments at St Vincent's Hospital and the Royal Women's Hospital. In addition to clinical anaesthesia, she has an interest in medical education and medical ethics. Recently, she completed a Masters of Health Ethics at the University of Melbourne.

Dr Min Li Chong MBBS FRACGP FAMAS

COMMITTEE

Min Li Chong is a general practitioner in West Heidelberg with a special interest in medical acupuncture.

Dr Salena Ward MBBS

COMMITTEE

Surgical Registrar undergoing advanced training in General Surgery.

Dr Choong Khean Foo (Benny) MBBS MAppSci FAMAC; MCGP MASH

COMMITTEE

Choong Khean Foo (Benny) is a holistic practitioner. He graduated from Melbourne Uni(1960). Whilst working as a GP in Singapore he was the Foundation Secretary of the Singapore College of General Practice. On his return to Melbourne in 1977, incorporating western medicine into whole-health practice with acupuncture, nutritional and environmental medicine, hypnosis, meditation, manipulative medicine, homoeopathy, bioenergy medicine, Qigong therapy. He graduated in Master of Applied Science (medical acupuncture) at RMIT, teaching in the Australian Academy of Holistic Medicine and the Acupunction Foundation of Australia.

Dr Mee Yoke Ling MBBS FRACGP MPH

COMMITTEE

Mee Yoke moved from Adelaide to Melbourne at the start of 2001 to work as a lecturer in the Department of General Practice, Monash University. In addition, she works several sessions a week at Brighton Family and Women's Clinic. Her interests include mental health in general practice and medical education.

Dr Theong Ho Low MBBS

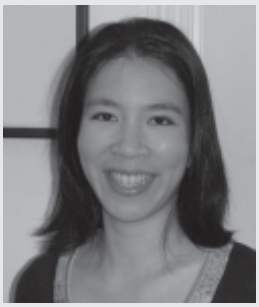
COMMITTEE

Theong Ho is a GP and works in Flemington.

Dr Siew Keng Chan MBBS FRACGP DipObs

COMMITTEE

Siew Keng Chan has been a member of the ACMAV since 1990 and a life member since 1997. She works full-time in her father's general practice in Altona.



Fiona Chan MBBS

COMMITTEE

Lawrence Wu MBBS, Dip Med Acup

COMMITTEE

Dr Lawrence Wu is a general practitioner working in Doncaster East with special interest in preventive medicine, nutritional medicine and acupuncture

Jun Yang MBBS

COMMITTEE

Jun Yang is currently in the physician training program at Monash Medical Centre.

Siew-Khin (Happy) Tang MBBS, FRCPA, FIAC, Dip. Cytopath

EDITOR 2004

Siew Khin (Happy) Tang is a Senior Consultant at the Victorian Cytology Service (VCS).

Joanna Ding MBBS, FRCPA, BMedSci

Co-EDITOR 2004

Joanna Ding is a Fellow in Cytology at the Victorain Cytology Service (VCS).

Secretary's Report

In 2004, I have had the pleasure of being ACMAV's secretary, as well as continuing as webmaster. This year, under the direction of our president Frank Thien, the committee has been successful in recruiting many new members, and maintaining quality educational seminars.

Once again, the year was kick started with a social Chinese New Year Yum Cha and lion dance. The focus was to allow members to meet the committee and other members. As in the previous years since 2000, there was no lectures or presentations to distract members from the sumptious banquet. The year was followed by eight excellent events, at delightful locations such as Choi's, Fenix, Taipan, Shark's Fin House and All People's Restaurant. I would like to thank our members, our sponsors, as well as the VAMA (our Vietnamese friends) for a wonderful year.

The highlight of the year was the Annual Conference at Novotel. The conference committee's arduous efforts cannot be overlooked, and the event was a resounding success. Great speakers combined with great food. The 2005 conference will also be a big event, as it will be a combined National conference with the Australasian Council of Chinese Medical Associations (ACCMA).

Behind the scenes, we have been continuing with our community services and the 11th Annual ACMAV doubles tennis tournament was held on 24th October 2004. The winners were Douglas Gin and Michael Cheng. The runners up were David Chong and Yu Long Leow. Once again we thank Mayne Health for their generous sponsorship of this tournament. A special thanks also to David Chong, who, until this year, has tirelessly organised this annual event since its inception.

Thank you for your support of the ACMAV in 2004.

David Lam

Tennis Tournament

The 11th annual ACMAV doubles tennis tournament was held on 24th October 2004. The winners were Douglas Gin and Michael Cheng. The runners up were David Chong and Yu Long Leow. Once again we thank Mayne Health for their generous sponsorship of this tournament. A special thanks also to David Chong, who, until this year, has organised this annual event since its inception.

Trevor Lau-Gooey

"Advances in Medicine" – ACMAV Annual Conference 2004

The ACMAV Annual Conference was held on a most auspicious day the 8th of August, in the year of the Monkey.

The theme was "Advances in Medicine" and about 85 registrants arrived early on a Sunday morning at the Novotel Glen Waverley for a day of education and socializing. In keeping with the theme each speaker highlighted the latest developments in their field – from infectious disease to cardiology. Abstracts / articles from some of the speakers have been published in this year's Qi.

The buffet lunch at the conference was a relaxed sit-down occasion where the conference delegates mingled with the speakers while enjoying the delicious fare. The final education session was the "Prostate Panel Discussion" where a panel of experts on all aspects of prostate cancer gathered for some hypothetical case discussion. Dr Khai Yuen Tang was the moderator. Many thanks to each speaker for their time and commitment. The day concluded with the conference dinner at Tai Pan Restaurant. Between courses of our Chinese Banquet a tidy sum was collected from dinner guests for "Project Africa".

Thank you to our sponsors of the conference – Gribbles, Novo Nordisk, Servier, AstraZeneca, CSL, Fleet, Schering-Plough and Lundbeck. And to the members who attended and made the event a success. Your commitment and support make it all worth while.

See you at next year's Conference 2005!

Mee Yoke Ling
Conference Convenor

Speakers: Asso. Prof. Denis Spelman - " New and emerging infections in Australia and beyond"
Mr. Gavin Wright - "VATS, HATS & HALO - More acronyms, less invasion"
Dr. Robert Lew - "Update on Cardiology"
Dr. Christopher Fong - "Update on osteoarthritis"
Dr. Helena Teede - "HT - Where we are at"
Prof. Ban-Hock Toh - "Autoantibodies in Clinical Practice"
Panel: "Prostate Cancer and PSA Screening"
Dr. KhaiYuen Tang, Dr. Michael Chao, Dr. David Deam, Dr. Paul Nisselle, Asso. Prof. Mark Rosenthal

Dr Paul Nisselle (left) and Mr Yee Kar Chan

Speaker : Professor Ban Hock Toh

Registration : Dr Jun Yang and Dr Selena Ward

Speaker Mr Gavin Wright enjoying lunch

AstraZeneca desk : Ms Nikki Black(centre) and Ms Dhuri Telfer(right)

Community Services Report

The Association continues its activities supporting the local Chinese Community in 2004. Various talks were given in The Box Hill Elderly Citizens' Club in English, ably translated by Mr Eric Chen to Cantonese. Ms Holly Zhang from the Chinese Health Foundation supported us in having Powerpoint / written script translated to Chinese at short notice. Her immense help needs to be acknowledged.

Our immediate past president Dr Benny Foo gave an excellent talk on Healthy Eating in relation to the Chinese diet. Rheumatologist Dr Chris Fong spoke on Osteoporosis and Osteoarthritis. Urologist Mr Yee Chan covered the topic of Common Voiding Problems and Dr John Wong advised them on the maintanence of health towards the 21st centuary.

All the talks were very well received and the Senior Citizens would continue to benefit from these health promotional talks. More input from members interested in preventive medicine are required to maintain this much appreciated project.

The ACMAV, represented by Drs Frank Thien, Benny Foo, Theong Low and Lawrence Wu attended in August, the presentation of the On Luk Nursing Home to be built at Donvale in Melbourne. This is a worthwhile project, the building of a Nursing home that caters specifically for the local Chinese Community. While lots of planning and work remains to be done, the ACMAV supports this enormous and challenging project and wish the Organising Committee every success in their venture.

Lawrence Wu

ACMAV Calender of Events 2004

1st Feb 2004
Chinese New Year Yum Cha

3rd March 2004
Educational Seminar : New Treatment in Diabetes and the Diabetic Foot

14th May 2004
Financial Seminar sponsored by HSBC.

3rd June 2004
Educational Seminar : Joint VAMA meeting

15th July 2004
Update Seminar : Sexual Health

8th August 2004
ACMAV Annual Scientific Conference

15th September 2004
Educational Seminar : "The Red Eye" and "Noughts, Dots, and Flashes"

17th November 2004
Educational Seminar : "Advances in Asthma" and "Advances in Gastroenterology"

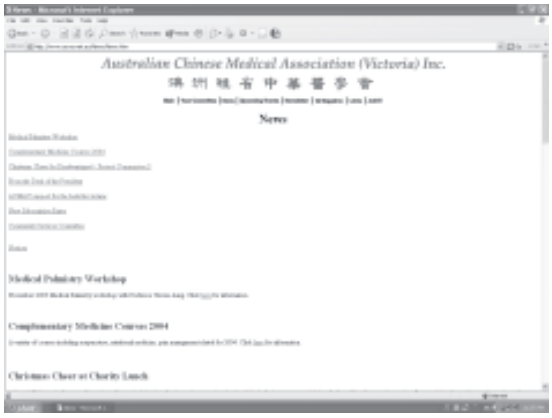
AUSTRALIAN CHINESE MEDICAL ASSOCIATION (VICTORIA) INC.

澳洲維省中華醫學會

Past Office Bearers

YEAR	PRESIDENT	VICE-PRESIDENT	SECRETARY	TREASURER
1985-87	Dr Tom C. T. Tsiang		Mr Kevin Siu	Dr T. Chong
1988	Mr Kevin Siu		Mr Stephen Ong	Dr Stella Kwong
1989	Dr Stella Kwong		Mr Stephen Ong	Dr David Chong
1990	Mr Steven Ong		Dr Andrew Ngu	Dr S. C. Choong
1991	Dr David Chong		Dr Andrew Lim	Dr S. C. Choong
1992	Dr David Chong		Dr Andrew Lim	Dr S. C. Choong
1993	Dr Andrew Lim	Dr C. H. Mok	Dr Joseph Cheung	Dr S. C. Choong
1994	Dr Andrew Lim	Dr S. C. Choong	Dr Joseph Cheung	Mr John Chew
1995	Dr Joseph Cheung	Dr Newton Lee	Mr Victor Mar	Mr John Chew
1996	Mr John Chew	Dr Newton Lee	Mr Richard Hing	Mr Gary Liew
1997	Mr John Chew	Dr James Khong	Mr Richard Hing	Mr Gary Liew
1998	Dr James Khong	Mr Gary Liew	Mr Richard Hing	Dr Irene Tan
1999	Mr Richard Hing	Mr Gary Liew	Dr Johannes Khor	Dr Irene Tan
2000	Dr Siew Khin H.Tang	Dr Serge Tang-Fui	Mr John Chew	Dr Peijian Zeng
2001	Dr Serge Tang-Fui	Mr Andrew Bui	Dr Michael Chao	Dr Peijian Zeng
2002	Dr Choong Khean Foo	Mr Kevin Siu	Dr Min Li Chong	Dr Siew Keng Chan
2003	Dr Choong Khean Foo	Mr Kevin Siu	Dr Min Li Chong	Dr Siew Keng Chan
2004	Dr Frank Thien	Mr Kevin Siu	Dr David Lam	Dr Maggie Wong

An update on the website



Over the past year, the ACMAV has been slowly adopting a trend, that is, the increasing use of email communications and information promulgated via our website (www.acma.net.au).

Whilst to some self-confessed computer illiterates, this may be an alarming trend, as they rely more on other people to manage things, such as paying bills online, emailing, and checking of stock prices. However, there is no denying that this is a new age, and that it has become a priority to familiarise ourselves with electronic communications. At ACMAV, we have decided that the first step would be to obtain an email address, and the second would be to use it frequently. I believe frequent usage is the best way to learn and become confident.

The simple process of announcing an educational seminar, with members faxing back their intentions, is both labour and resource (postage and paper) intensive. And for a small organisation such as ACMAV, hosting at least 6 events a year, it can get expensive.

Therefore, ACMAV is "moving with the times", and we will soon rely on email as the primary method of communication, with additional information posted on our website.

For those who haven't been to www.acma.net.au before, you will find newsletters, information on upcoming events, and other news. Please visit regularly!

David Lam

"Congratulations"

On behalf of the ADMAV Editor, committee and members, we would like to congratulate Fiona and Daivd Lam on the birth of Sarah Yu Ching LAM.

Fiona and David have been active members of the committee and David has served as secretary and webmaster in 2004.

Best wishes for the future!

Distinguished Personality

Edmund Ek

For Edmund Ek, Monash University's top graduate for 2003, an introduction to surgery and medicine started somewhat earlier than most. As a 15 year old schoolboy he would return to Malaysia for a relaxing summer break, only to later find himself fully scrubbed and gowned assisting at a laparotomy! It seems his uncle, a urologist "and sometimes general and vascular surgeon who also runs a dialysis unit", was so keen to enthuse the younger family member with his love of medicine, that he would at every opportunity drag Edmund and his cousins to his Ipoh practice to view life from behind a surgical mask. Edmund maintains, however, that his holiday experiences had little impact on his decision to pursue a career as a doctor.

Born in Kuala Lumpur, Edmund migrated to Australia with his family when he was only about a year old. He completed his schooling at Haileybury College before entering medicine, joining the ranks of a larger medical family: Edmund's older brother is currently a 3rd year resident at St Vincent's Hospital, and his father is an orthodontist; he has an uncle who is an obstetrician/gynaecologist and two others (including the aforementioned urologist) are surgeons. Then there is the ophthalmology registrar cousin, and if the family's health needs were not already covered, there are seven other cousins currently at med school!

But it takes more than a medical pedigree to succeed, and Edmund's outstanding academic record is a testimony to his hard work, aptitude and thirst for knowledge. He established himself as the top student in his year in medicine, and collected along the way a full complement of prizes and awards:

- *Sophie Davis Memorial Prize* for the highest aggregate of marks in the award of MBBS with Honours
- *Harriet Power Scholarship* in Medicine
- *Robert Power Scholarship* in Surgery
- *Australasian College of Dermatologists Prize* in Dermatology
- *Harry Hindlip Green Scholarship* in Medicine
- *RACP Victorian State Committee Prize* in Clinical Medicine
- *Arthur Clark Award* in Paediatrics
- *Australasian and New Zealand College of Anaesthetists Prize* in Anaesthetics
- Recipient of the *Monash University Summer Vacation Scholarship*
- *McInness* Medicine and Surgery Prize
- Nominated for the Final Round examination for the Envirohealth Prize
- *David Rosenthal Memorial Prize* for the highest aggregate marks for the first three years of the MBBS course
- *Faculty Prize* awarded to the top two students in third year
- *Association of Monash Medical Graduates' Prize* for Clinical and Communication Skills in second and third years
- *Solly Faine Prize* in Infectious Diseases
- *Faculty Prize* awarded to the top two students in second year
- *William M. Crosby Prize* in Cardiovascular and Respiratory Medicine

Edmund is currently completing his internship at St Vincent's Hospital, and his aspirations – at least for the moment – are towards a career in plastic surgery.

Yet medicine is only one of many interests pursued by this accomplished all-rounder. Edmund is a self-confessed "sports nut" who once dreamed of playing football professionally (in fact he was a regular player in the centre and on the wing for Old Haileybury). He is a keen tennis player and golfer, and a passionate Essendon supporter. Off the sports field, Edmund has the desire to go abroad at some stage to be involved in short-stay mission work. As a member of Interserve Australia and Christian Blind Mission International, he hopes to have the opportunity to travel to places like Nepal to put his medical training into practice for the benefit of others in the wider global community.

Undoubtedly a bright future lies ahead for Edmund. His enthusiasm and compassion will only add to his academic achievements in defining his success in medicine and beyond. He may deny that his career and his commitment had its source in summer holidays past, but one suspects there is a surgeon in Ipoh, a very proud uncle, who is keenly following his progress and quietly grinning, knowingly.

Adrian Mar

Feature Article

First Chinese lady doctor

Miss Lam Hau Ngar (林巧稚) was born in Harmun (now XiaMen廈門) to a Chritian family in 1901, towards the end of the Ching dynasty. Her father Lam Leong Ying graduated from the University of Singapore and worked as a translator. Whilst studying at a teachers' college, she was observed to have skillful hands and was encouraged to study medicine. She could also have been guided to this career as her mother died of cancer of the cervix. In 1921 she enrolled in the HipWoh(協和) Medical School in Peking (now Beijing) from which she graduated with flying colours. For her excellent results she was rewarded with a scholarship which gave her the opportunity in 1929 to enroll in the Peking Union Medical College (PUMC) with the status as the first female resident in the field of Western medicine. She specialised in Obstetrics and Gynaecology and showed interest in Oncology.

In 1932 she went to London for further medical training, and to Vienna as well. In 1939 she travelled to University of Chicago to keep abreast with recent advances in treatment of Gynaecological cancer. In 1940 she returned to China to become the first woman doctor incharge of a department in a hospital, the very hospital (PUMC) where she had received her undergraduate training. She subsequently attained even greater honours and was appointed Vice Chancellor of the HipWo Medical School.

Throughout her career she not only demonstrated medical excellence but showed compassion and understanding of the hardship suffered by her patients. She was known to help the poor who could not afford hospital fees, by contributing from her personal funds. Her reputation as a doctor was well established in the community. Her devotion and involvement in the People's Congress (全國人大) resulted in her elevation to Vice Chairman of the China's Women's Association (全國婦聯).

In 1978 she made an academic tour of European Medical institutions and whilst in England she suffered a cerebrovascular illness, returning home bed-ridden. She died on 22nd April 1983 at the age of 82 years, in HipWo Hospital.

To commemorate her fame, a museum was built in Harbin province. A plaque erected there commemorates her 50 years of service to the Academy of Medicine. Li Pang (李鵬) a high ranking official in the Chinese Communist Party wrote a poem in praise of her dedication to humanity. At the centenary of her birth, a bronze statue of Lam Hau Ngar was unveiled at a ceremony in the People's Congress Hall.

Har Mun (XiaMen) city has now established a foundation fund in her honour to provide scholarships in Women's health and Paediatrics. One sizeable donation of Rmb $ 500,000 came from an American Chinese, Chui Tin Pui .

Siew-Khin Tang

Reference: Information from internet sources - http://www.cas.ac.cn/html/cas50/fcl/067.html; http://www.cqcb.com/gb/map/2004-03/06/content_171926.htm.

Feature Article

Medical women in early Victoria

In Australia today, women are a prominent and valued part of the medical workforce. More than half of the medical students in our universities are female. Indeed we have come a long way in only four or five generations, from a time when the very thought of women studying to become doctors was looked upon with disdain.

The University of Melbourne's pioneering women graduates – including the first female medical graduates – have been acknowledged in a study by Ms Farley Kelly of the Women's Graduate Centenary Committee. The introduction of women students can be traced back to 1883 when Ms Bella Guerin then age 25, graduated with the degree of Bachelor of Arts. She was the 225th recipient since 1858. It had taken 30 years for a woman to receive a degree, which was conferred in the newly constructed Wilson Hall. Cartoonists and newspaper reporters at the time quoted her as "M.A.", intending to inflict ridicule upon her and attempting to liken the title to "MAMA"!

Four months later, in April 1884, Lydia Harris became the second B.A. recipient, followed by Laura Moelin in 1885. Lydia found it difficult to tolerate the masculine culture when she was confronted with loud cheers of "For she's a jolly good fellow". Only a few women graduated in the following years, one in 1886 and

The famous 'Seven Women ' of 1887. Back row : Helen Sexton, Lillian Alexander, Annie O'Hara, Front row : Clara Stone, Margaret Whyte, Grace Vale, Elizabeth O'Hara

three in 1887. However in this significant year 1887, enrolment of women into Medicine culminated in graduates before the end of the century.

Intellectual pride was not encouraged and women like Bella Guerin experienced rebuke for her achievement, even by the nuns in her home town of Ballarat where she was brought up as a Catholic (her father was of Irish descent and the Chief Jailer). She discarded her religious beliefs and with pride referred to herself as "first lady graduate" in her correspondence. The argument against encouraging intellectual advancement in women included the financial concept: "boys gave a better return on educational investment; girls would either not complete their studies or marry soon afterwards". The perception that "women's work" did not require university qualification, and the fear of diminished wages and competition for the same jobs contributed to this belief, and eventual loss of respect for the "weaker sex". The notion of women copying men's lives or competing with them was not acceptable, as "women had smaller brains"; mental strain would "affect reproductive functions" and "flat-chested university women would not be able to bear babies".

This was the belief then, which led to rejection for admission to the University of Melbourne, of Mary Sanger Creed in 1871 in spite of her having passed all seven subjects at the matriculation examination. Her hopes were dashed when she was informed that "the University Act of incorporation did not mention females and therefore they were excluded"!

Following the success of Bella Guerin, Grace Clara Stone and Margaret Whyte became the first female Medical Graduates in 1889. Their 5 years at Medical school were not easy, with accusations of preferential treatment (women students at the front rank were accused of "distracting surgeons at work", and special rooms allocated for dissection were "permissive and costly" as four female students shared a cadaver compared to eight men to a body). The women graduates also had to fight for places of residency to which they were entitled. Three of the women finished within the first seven in the class of 1895 and therefore should have been posted to the Melbourne Hospital. Instead they were directed to serve at the Alfred Hospital. In the following year 10 women graduates, with community support, established the Queen Victoria Hospital, where they were rostered to administer services to the outpatient department. Within the period of September to December of that year they had provided a service for 2,000 women attendees. In 1899 an inpatient service was opened.

Matters relating to women undergraduates were largely ignored, as they were refused representation on the Medical Students' Society, and in 1902 the Women Students Medical Society was formed. Finally in 1918 the two societies amalgamated and the relationship between the medical men and women fared better than in other faculties. This harmonious association still did not allow women to pursue the specialties until 1988, as reported by Priscilla Kincaid-Smith in her Guest Editorial for the publication of the University of Melbourne Medical Society. It was not therefore until 100 years after the first woman enrolled into the medical course (1887) that the battle for equal opportunity for women was won.

It is apparent that Medical Women have faced difficulties and obstacles with every step. We should all be encouraged and inspired by the persistent resolve of these pioneers. Undaunted they have proven their mettle, and through their endeavours they have laid the path for women to realise their dreams in their chosen fields of science and medicine.

This is an edited extract from "Degrees of Liberation: A Short History of Women in the University of Melbourne" by Farley Kelly 1985.

The Editor wishes to thank the University of Melbourne for permission to reproduce the photograph, and Dr Geoff Kenny for his assistance in obtaining the reference material.

Siew-Khin Tang

Feature Article

Dr Leonard Cox - the Chinese connection

"A Melbourne doctor and his generation" is a recently published biography of Dr Leonard Cox. This remarkable man, who died in 1976, made a significant contribution to the specialty of neurology in Australia while having an equally impressive influence in the areas of fine art and botany. Amongst his varied achievements, he established the first neurological clinic in the country (together with Hugh Trumble) at the Alfred Hospital; as Chairman of the National Gallery of Victoria he was a main player in the selection of the architect Roy Grounds and the construction of the new St Kilda Road gallery; and as an expert on Rhododendron research, he was instrumental in the creation of the National Rhododendron Gardens in Olinda.

Dr Leonard Cox (1894-1976).

Leonard Cox's connection with China and the Chinese people stemmed from his passion for Chinese art. Indeed he became an authority in this field, and as Honorary Curator of the Oriental Art department at the NGV he oversaw the formation of one of the finest Asian museum collections in the country. This in turn led to his invitation to join a cultural delegation to travel to China in 1956, at a time when the communist regime was viewed with suspicion and hostility. In spite of being labeled in some quarters as "the Red Doc", Cox returned to China the following year as leader of a medical delegation where he sat with Mao Tse-tung and Chou En-lai.

The following is an edited extract from his biography recounting his two historic visits to China:

The Cultural Delegation Tour of China in 1956

In 1955 Cox appeared to have seriously considered attending another International Neurological Congress. The 1953 trip – although it had cost him a small fortune – had left him culturally and intellectually refreshed, and further, it had infected him with a mild form of the *travel bug*. When Professor Patrick FitzGerald early in 1956 raised the idea of a visit to China, Cox naturally listened with attention…

Art collecting, especially oriental art, had been Leonard Cox's great love since World War 1, and though his involvement in it had waxed and waned due to the demands made by his profession on his time, it was never out of his mind for long. When not "snooping" around antique shops, or perusing catalogues from overseas dealers, he continued his prolific, indeed voracious, reading, including many of the new and standard textbooks on Chinese art and history.

In the early 1940s (possibly even earlier) Cox had joined the China Society (Victoria), a small group that occasionally arranged private viewings of its members' collections of *objets d'art*. In 1944 the Society, with the assistance of collector George Ewing, mounted an exhibition of Chinese art, probably as a fundraiser for the war effort, and Cox contributed several items from his collection. He became quite well known as a Chinese art connoisseur through his occasional talks on Chinese art to interested individuals from about 1940 onwards. He continued these lectures in the 1950s (including a series of public lectures presented at the

Historian and freelance writer Volkhard Wehner has worked as a building worker, a berry farmer, college lecturer and librarian. He has published a number of small books and articles on gardening, Australian history and Australian art. He is currently working on a history of Edna Walling gardens in the Dandenongs.

The 1956 Cultural Delegation to China; Premier Zhou En-Lai is centre, with Leonard Cox on Zhou's left.

Fine Arts Department of the University of Melbourne in July 1951), through the 1960s and into the early 1970s.

A number of Cox's friends had been "infected" and inspired by his collecting enthusiasm. These included Rupert Willis; the youthful Ken Myer; and to an extent a number of his colleagues, including Guy Reynolds, Geoffrey Kaye and perhaps even Peter MacCalluum. One can almost imagine their conversations – moving easily from Sluder's neuralgia to Song ceramics. Cox's training as a physician and his knowledge of science, combined with his exceptional powers of observation and analysis no doubt contributed significantly to his understanding of the processes for the manufacture of ceramics in ancient times. Whether Leonard Cox ever became a member of the Australia-China Society, which had been founded in the early 1950s, is doubtful, especially in view of the society's (largely undeserved) left-wing reputation. One has to remember that this was the time when the Cold War was at its peak and anti-communist hysteria was rife. Only recently Leonard's old school mate Bob Menzies had discovered a useful ruse for staying in power by getting his fellow Australians to look for the dreaded "reds under their beds". Cox was intuitively opposed, not so much to communism as he *understood* the ideology, but rather to its practices of brainwashing and manipulation for political purposes. He hated *being used*.

It was through the Australia-China Society that Professor Patrick FitzGerald, Professor of Far Eastern History at the Australian National University, and the Society's National President, as well as one of Australia's foremost orientalists, was invited by the Chinese People's Association for Cultural Relations with Foreign Countries to assemble a group of Australians "well known in cultural circles" to visit China.

In 1956 going to China required courage. Few Australians – even reasonable, intelligent and enlightened people – would have approved; it was tantamount to declaring oneself a fellow-traveller, even a "pinko". Stirred up by press reports, the presidents of the Young Australia-Chinese Association of Victoria, the Chinese Youth Movement of Victoria, and the Victorian Chinese Youth Association wrote to Cox. They urged him to reconsider his plans. A similar warning was also received from the Overseas Chinese Anti-Communist Association of Australia. An untraced letter to the editor from an Essendon reader is alleged to have referred to Cox as "the red Doc", whom the writer urged to go and stay with *his Peking friends*. However, there was also support for the proposed trip. A.T. Parker of Toorak wrote:

> Do not take any notice of little men or minds...the great bulk of the people of Aust.[*sic*] are in favour of recognizing China. The public ought to acclaim...[your] action at a later date...The best of luck on a fine gesture to our fellow men...

The five-week visit proved to be an eye-opener for all members of the party – revealing both the good and the bad. Leonard's diary could almost be published on its own as a highly informative book, perhaps entitled "A conservative doctor's visit to China and how he fell in love with the country and its people".

The visit, planned by the Chinese at the highest level, also included a lengthy face-to-face meeting with Premier Zhou En-lai. Although it had been arranged for Leonard Cox to meet largely with medical people – including the Minister for Health and other high medical office bearers – he was also able to meet with staff at hospitals and medical schools. But in his heart of hearts he went for the art of China. His greatest

thrills derived from visits to oriental art collections in museums, galleries, several cave temples and other historic sites.

The group left Sydney on 27th April 1956. They travelled by air and rail via Hong Kong to Guangzhou, then to Beijing, to the magnificent Yungang Shiku caves near Datong, to Nanjing, Shanghai, Hangchow, and to the Buddhist temples of Lungment at Luoyang, Hangzhou. Positive as well as less pleasant impressions are often juxtaposed in Cox's diary. He empathized with the harassed "poor ordinary folk, getting up the steep steps with masses of their belongings, carried on huge bamboo poles", contrasting with his observations on the "mollycoddling" of these foreign visitors, being treated like guests in a land of milk and honey. In general the Chinese allowed them to move about with virtually complete freedom. Quite rightly, Leonard saw this less as a Chinese ruse than as a sign of their maturity and conviction as to their cause. He considered the Chinese a far less ideological than a practical, even pragmatic people – an observation that has been proven by subsequent history. Much later on the tour, at the Sun Yixian (Sun Yat-sen) monument in Guangzhou, scene of a bloody revolutionary clash in 1911, Cox observed that "it seemed that some of the executioners were still alive…The Chinese leader said that Chiang himself would be suitably used if he returned and would cooperate. What a practical people! They waste nothing!" During the early part of the tour, besides the Great Wall, the Yungang Shiku, and others, there were also a few *obligatory* visits to tractor and machinery factories, or housing blocks, where "I asked to inspect the sanitary arrangements which were clean and not bad".

At the Imperial Palace Museum, Beijing 1956.

The visit to the remarkable monuments Yungang Shiku near the old Shanxi Province capital Datong and its magnificent statuary and temples (on 15-18 May), attended only by a few members of the group, was one of the great highlights of the tour. Cox noted that its "small Liao (temple) should be a National Treasure". Then days later, their visit to the great Buddhist cave temples of Lungmen would even exceed the Yungang Shiku monuments. They "were magnificent", even though they had been vandalized by American collectors in the past. Fortunately, "much of the delicate Wei tracing is left, and there were many marvelous panels". Equally magnificent were the nearby Ten Thousand Buddha caves: "Off to see a Han tomb. This was most exciting…picked up Han pottery fragments, Han tiles, Quin tiles, and two pieces of Chun", which the director of archaeology allowed him to keep.

A two and a half hour face-to-face meeting with the impressive, well-informed Zhou En-lai, demonstrating the Chinese Premier's amazing grasp of complex situations, was a highlight of the tour, especially for Cox, who would, grudgingly incline to a degree of hero-worship when meeting such an obviously towering individual. Cox's diary entry of the meeting is worth quoting at length:

> At 12:45 we solemnly moved off to meet the great man...The PM is a short dark-haired man, with a mouth that sets grimly at times. His intelligence is unquestionable, he is quick, knows much on any subject...and I am sure could be grimly ironic. He commands a situation, but has a sense of humour. He is utterly practical, and pays little attention to red tape I think. He asked us to talk frankly. He however did most of the talking in Chinese with a fine interpreter, but it is plain that he knows much English. Occasionally he corrected his interpreter...He could be like iron I should imagine...

After this, the discussion turned to the new transliteration system adopted for Chinese, which Zhou endorsed strongly, but which many Western scholars took a long time to adopt. Then:

> Others asked a few questions. The question of Chinese art in Australia [that is, an exhibition sponsored by the Chinese] was next asked. He was for it...Ancient Chinese as well? He replied "of course; great art is universal and should be shared by all countries. If you let us know what you would like, it can be arranged"...I asked about Chinese specialists and post-graduates visiting Australia. He again immediately said "of course". [At this]...the Academica Sinica members present...looked at Chou with pride...

Even the Australians had grounds for being pleased with the outcome. "After two hours we left, and were photographed with him. F. on his right and I on his left".

Gallery visits, and especially inspections of the vast treasures of newly excavated art finds – where Cox would occasionally impress even his hosts with his considerable knowledge – were highlights for him. The medical and hospital situation in China proved to be of far less interest to him, because there were neither cutting-edge procedures to be observed, nor any interesting equipment. In fact, the equipment often appeared to be inadequate or antiquated. "They need sharpening up with better equipment and techniques", he noted at Beijing University Medical College, but elsewhere, "they are hard at isolating Chinese [herbal] drugs and testing them out…they also have a fungus antibiotic which helps cancer". He noted the inadequately short training period given to young doctors (especially in the "hard sciences"), and the shortage of pharmaceuticals and antibiotics. But conversely, he was impressed by the extreme keenness of the staff to make the most of very little.

In a press interview at the end of the tour he raised these points quite strongly. While Peking Beijing University Medical College – obviously a show-case institution – rated well, the Research Institute on Acupuncture received a "slamming": "very underdeveloped". He went on to note: "The director was a shifty little man…we were not greatly impressed…they claimed cures of cases of congestion behind the eyes…asthma, by puncturing the wrist…It was poor indeed". This is surprising, as Cox in his earlier neurological practice had always been keen to find an alternative if other therapies failed. A neurosurgeon at Guangzhou "says they also practise acupuncture and nosea. He says earthworms are good for asthma". At the Central Research Institute of Medicine, Cox presented a three-hour lecture, after which he was asked many questions, in good English. The teaching of English (to allow reading of medical literature), became quite a mission for Cox, one to which he returned frequently in his diary.

At every railway station or airport, wherever they arrived, the group had to endure a ritualistic line-up of their dozens of hosts. "We were met by a long line of University Professors and Directors, with whom we shook hands, and bowed…[and frequently there were] sweet little girls of about 16 [who] gave us huge bouquets of flowers". Most members of the group adored this ritual, so different from Australian ways. "Alan Marshall was almost emotional with joy…[but] Davis was depressed to see such sweetness in a decayed city".

The Chinese were obviously aware of the public relations potential of the visit, and immediately after the meeting with Zhou, Cox was approached to make a return visit the following year, as leader of a medical

Meeting with Zhou En-Lai, Beijing 1956. Left to right: Cox, Prof Percy Partridge, Prof C P Fitzgerald, Zhou En-Lai.

delegation. He agreed reluctantly. More readily, he accepted a request to write a paper for publication in the *Chinese Journal of Neurology-Psychiatry*. This paper has not been traced.

At the farewell banquet at Guangzhou, where their official host, Professor Zhou, got hopelessly drunk – "…the pace was terrific; universal affection and love…innumerable toasts in Chinese brandy…bottoms up", - Cox sketched out "what I was prepared to do for medicine in China and archeology in Melbourne":

Medicine

1. I will immediately discuss with Sir Macfarlane Burnet the question of a) research workers b) clinical lecturers visiting China with the intention of advancing the question of future research methods and giving lectures in such courses as the authorities in China decide
2. Get the Chinese to give details on members, nature and timing
3. LBC will contact the appropriate Royal Colleges (Phys, Surg) for discussion

Museum

I will discuss with my Chairman and fellow trustees of the NGV the question of a request to the Chinese Govt for an exhibition of Chinese art to be shown at the NG Melb. This will include the question of cost, insurance…

The degree to which these personal undertakings were realized has not been examined.

Perhaps a little more needs to be said about Leonard Cox's response to the Chinese people and the landscape of China, which are so much a part of the Chinese art that he loved.

His attitude to the Chinese was complex. It was largely positive, at times almost inscrutable – almost on a par with the popular metaphor of behaving like an "inscrutable oriental". A compliment paid by his friend Professor Hao that Cox was "at least 60% Chinese in his behaviour" please him greatly. Cox's NGV colleague, Mae Pang, similarly comments on Cox's deep affinity with Chinese art, using the metaphor of his "Chinese eyes". However, the remaining 40 per cent of Cox were deeply embedded in his Western roots; he remained in many ways a typical unreformed Westerner, and culturally not in the least a "new age" man. He greatly admired the Chinese for their resourcefulness and imagination, but his attitude was perplexing too. There is a degree of *obliqueness*: he neither would nor could use chopsticks. While he was greatly moved by a fine Beijing Opera production, he appeared to have little appreciation of Chinese music generally, or the moving singsong effect of its ancient poetry. This man with such great love for China's art could also occasionally refer in his diary to Chinese customs as "queer".

Cox's way of viewing China and its landscape is often dreamlike. His description approaches a point were life almost blends with art, and where man or woman or any human activity is nothing more than a facet in the landscape, just as they are in art. For example, the crossing of the Chang Jiang (Yang-Tse) River, where, "in the early glimmer of light the river boats with their queer sails looked like moths as they were setting out on the stream". The image of moths recurs several times: at Hangchow, "river boats looking like moths, and their sails so like banana leaves. All these are descriptions of landscape just as an artist would deal with it. Besides the poetic descriptions, throughout his diary Cox gives us more concrete description similar to those we have come across on his European and American visit, which show his keen eye. "Now the square towers [former feudal landlord's seat] had disappeared, but still the black tiled roofs, often simple, but sometimes slightly curved up at the gable end". He includes a sketch, followed by – "The black tiled roofs gradually became thatched as we moved towards the wheat area. The graves are now small mounds".

After parting from their Chinese friends at Guangzhou, accompanied by an enormous box of gifts and treasures from the Chinese, there was still some business to be discharged. At Hong Kong at the Pathology School Cox met Professor Hao Bozhang, a great friend of Rupert Willis', with whom he "clicked" immediately. Hao was also a keen art collector, as well as a practising calligrapher. He must have triggered Cox's later attempts to study the art of calligraphy – albeit not

very successfully. As his later teacher Gordon Low observed, Cox had sometime in early life sustained a fracture to his wrist – a so-called Colle's fracture – which prevented him holding the brush as is required for this art form.

After that, it was off to the oriental dealers D Y King's, where by fortuitous chance Cox met "old Siren", the famous Swedish orientalist and writer, whose books he had assiduously collected and read over the years. He also visited the art dealers M K Loo, where he made some personal and NGV purchases. Cox was wined and dined in style, and taken on a memorable harbour cruise.

After Cox's return to Australia, some of the press controversy reignited. Several of the Coxes' friends chose to ostracise them. At a Government House reception attended by Leonard and Nancy, they were stood up; no-one wanted to be seen with them. Returning home, Nancy said to her daughter Barbara: "No one spoke to us. We've been sent to Coventry. Your father loved it!" It was considered by some that Dr Cox might be a bit pink and indeed some people of the establishment were a little less inclined to speak with him", remembers Ross Anderson. But at another function attended by Prime Minister Robert Menzies, Menzies called Cox aside with the words. "now Len, tell me all about China". There is no question that the China trip had moved Cox imperceptibly to the Left. First, it opened his mind to concerns that previously would not have crossed his conservative mind. Second, it gave him the chance to become friendly with an entirely different group of people in Australia whom previously he might have rejected on purely ideological grounds.

A farewell toast to international friendship with Prof Zhou (a relative of the Premier), Guangzhou 1956.

China 1957: Medical Delegation Leader

One might ask why Cox agreed to return to China so soon, particularly in a medical capacity. Indeed, China was a challenge, but more in terms of training and equipment than in terms of new medical ideas and practices. Of course, Cox had developed a deep empathy with its people, and made many personal contacts. He also loved the land. The lure of China's art treasures would have remained strong. It seems that the powers of persuasion employed by the Chinese must have included some very tangible promises of cultural and medical exchange arrangements, otherwise he might have resisted – for a variety of reasons, not all of them entirely clear. Financial factors cannot have been at their root since, once again, the Chinese insisted on paying. One of the more important reasons making him hesitate was the fact that he was expected to lead the delegation. No-one could question his leadership qualities, but he preferred "to lead from behind" and remain in the background. The Chinese would not accept this.

But is was too late to cop out when Dr Fu Lianzhang, the President of the Chinese Medical Association, addressed an invitation to Cox on 20th July 1956. Dr Fu outlined the tour objectives briefly, requesting that "we would …like your delegates to give lectures, to engage in discussions and also to give demonstrations in operations". Fu also requested that any papers to be presented should be submitted well in advance so they could be translated into Chinese beforehand. The latter proved largely impossible because the insufficient lead time. Only weeks before the group's departure, the Chinese Embassy in Canberra (that is, the embassy of the Republic of China, Taiwan; at that stage the People's Republic of China was not yet represented in Australia) tried to jump on the bandwagon. It invited the delegation to visit Taiwan as well, as guests of the National Union of Chinese Physicians. For practical as well as political reasons Cox had to decline this invitation as "impracticable…on this occasion".

As to practicalities, the first step now was to seek clarification from the Department of External Affairs concerning official attitudes. Richard Casey, Minister

of External Affairs, had replied reassuringly, adding his person good wishes for the success of the tour, and noting that "the Government has taken the attitude of neither encouraging nor discouraging such private visits". However, he warned of the more rigid attitude taken by the US Government, which might affect any Australian participant at a later date. After this followed long negotiations with medical colleagues interested in joining the tour. There was quite a bit of jostling; several applicants had to be turned down. Leonard's friend Bob Noad undertook to organise the Sydney end.

The 1957 Medical Delegation. Cox is in the centre; to his left is H Barry, then Sir Peter MacCallum.

When eventually the tour got under way on 10th April 1957, Cox had gathered around him a party of twenty medical specialists. Melbourne and neurology people dominated, as might be predicted. Cox's old mate Peter MacCallum was effectively assigned the role of deputy leader. Cox's former "protégé" Keith Bradley was persuaded to join the party. There was not one female member! The tour covered almost the same cities as those of 1956, except that the direction of travel was reversed. Via Guangzhou they first went to Hangchow, then Shanghai, Beijing, Hangzhou, and back via Guangzhou.

Both Shanghai and Beijing were the longest and most productive stays. At Beijing the entire party attended a May Day eve reception given by Premier Zhou En-lai.

Zhou En-lai's address given to foreign visitors and guests on this occasion – not addressed solely to the Australians – noted that "our country is still backward in many respects, and not a few shortcomings still exist in our work…We hope that our foreign comrades and friends present here will give us criticism and counsel regarding our work…so that we may learn and benefit thereby". This was to be a prompt Cox would use for a gentle but firm rejoinder to his hosts in a radio broadcast he was invited to make towards the end of the visit. But first to the spectacle of the May Day parade:

> 1/5. May Day. The big parade started at 10...very artistic and colourful...It must have cost a mint...The poor half-fed farmers who paid for it were not represented...
>
> To a reception at night by Mao Tse-tung [Mao Zedong] on the top of the Tien An Men. Presented to Mao, and met Chou 2nd times [*sic*]. He sat with us for about ½ hour laughing at the most excellent floor show. No conversation however. He spoke English. Mao is learning it.

It was almost as if somebody had told Mao what Leonard had so strongly advocated in 1956! In a letter to his family written on 3 May, he describes the events:

> It has been a wonderful experience...Peter and I were invited to a party on the top of the Tien An Men gate to witness [the fireworks] and a most fascinating concert. We sat at small tables, Mao Tse-tung and Chou En-lai circulated amongst the guests and we met them and many other of the leaders.

It was not surprising that medical meetings and hospital visits predominated on this tour – "a good deal of medicine, but no old Chinese art", Cox complained. However, that was a little exaggerated: of course the organizers had included a number of museum and gallery visits, as well as visits to the Great Wall and several temples. And once more Cox fell under China's spell, as did every one of his traveling companions. At the Palace Museum, "the amount of 15th century

Cox addressing a medical audience at the Chinese Union Medical College, on cryptococcosis, 1957.

underglaze red and polychrome beggared description. Oh for some of the stem coups". Cox had to work for the privilege. "More speeches", he complained, and again, "I am fed up with speeches".

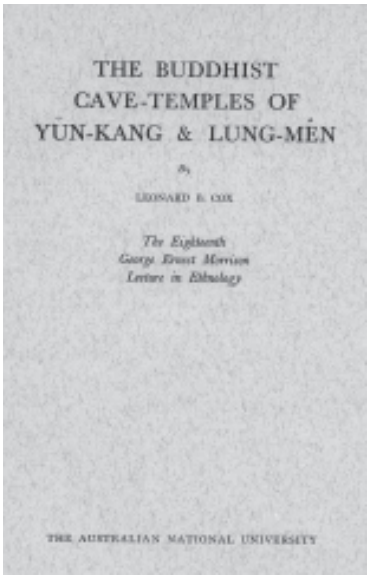
As a training run, the doctors had been invited by the Chinese Medical Association "to deliver our usual criticism and suggestions…All spoke at some length. Courtice was particularly good I thought on the lack of basic training, Pavlov, etc." (The latter was a relic inherited from their Soviet medical teachers.). Several of the Australians also raised the need for foreign exchanges for Chinese doctors. The follow-up to this was to be a radio address that Cox was invited to give, and for which he took his cue from Zhou's speech. But first Cox had to present a medical paper to an organization referred to as the "CUMC" (possibly the Chinese Union Medical College) on "Torulosis" [cryptococcosis].

The packed audience, largely post-graduate and research students, appeared to appreciate it, and it was simultaneously translated into Chinese.

In his radio address Leonard praised China's remarkable achievements in public health and the successful elimination of epidemics. He recommended to enhance the present short medical courses taught in China by extending them, especially by incorporating a more thorough scientific training program. He also recommended – perhaps somewhat more diplomatically than is stated by this writer – that there was an urgent need to replace the present small "geriatric" group of Western-trained teachers who were rapidly dying out, with a new generation of top Chinese medical personnel. He repeated his call for a comprehensive foreign (that is, English) language training program, coupled with medical exchanges with other countries. It seemed that the talk, broadcast over Radio Beijing, went well.

In an interview with a Melbourne paper some months later ("Our doctors see China's problems"), Cox reiterated the same sentiments, once again emphasizing that what he had to say represented the collective opinion of all the doctors.

Cox noted that compared with 1956, significant improvement were in evidence: more building was under way, half-completed construction sites from the pervious year were now fully operation, several hospitals were now better equipped, and great im-


THE BUDDHIST
CAVE-TEMPLES OF
YÜN-KANG & LUNG-MÊN

By

LEONARD E. COX

The Eighteenth
George Ernest Morrison
Lecture in Ethnology

THE AUSTRALIAN NATIONAL UNIVERSITY

Publication on Cave temples, 1957.

provements were evident in many other spheres. He wrote that "one can be much franker in China, even than last year". He also noted the continued use of acupuncture and traditional Chinese medicine, but, as in 1956, Cox made the rather churlish comment: "Saw acupuncture in full force…One of the patients was so pierced as to look like St Sebastian". "They are still saddled with the old Chinese medicine". There were still acute shortages of antibiotics.

At the Traditional Medical College in Beijing, However, he learned that the traditional drug "*Naudea styrophylla mig*" had been found to be effective against epilepsy in mice, and that "*Gastrodia elata*" was used as a sedative. The work there was admirable and imaginative, he felt, and "they have little to learn from us, but need sharpening up".

Cox's handwritten notes in his diary are difficult to read at all times, and more so when the words are in Latin. The two herbal remedies he refers to could not be identified. Dr Low has suggested that "*Naudea*" may refer to the ancient aromatic balsam *nardus* or "Nard" (*nardostachys jatamansi*, the Indian Nard), which belongs to the botanical genus *valerianaceae* and is credited with having anti-spasmodic characteristics.

It was with relief that Cox headed homewards on 7th June. Not only had everything gone well, but the travellers appeared to be well satisfied with the outcome. Cox especially was convinced that an "exit talk" he had with his friend Professor Zhou (a relative of Zhou En-lai – he was the one who had got so drunk the year before) would mean that their suggestions "will now go through to his relative the Prime Minister with him strongly behind it". As for Cox, "I have made so many speeches that I will probably be quite dumb when I get home".

After Guangzhou, and the big farewell, "I felt the strain was off, relaxed at last". He suddenly noticed, with pleasure, "more trees are out, some in flower, and all very luscious". The test was over, and it was time to reward himself with a few art purchases during the following few days in Hong Kong. In the company of Peter MacCallum, he briefly visited the dealers C T Loo and Kin's. There may have been time for a brief call on Professor Hao and Dr T B T Loh at the university's Department of Pathology – both of whom he had visited at the onset of the trip.

It appears that the anger over the visit of the cultural delegation in 1956 had now dissipated. No doubt even the hardliners of the Establishment started to realize that the position vis-à-vis China was in urgent need of reassessment. Evidently, the 1956 cultural visit and its echoes in the press had contributed significantly to this reassessment. Within weeks a number of the participants were invited to speak to various organizations and to write contributions to the media. Leonard Cox, after giving a presentation to the Rotary Club of Melbourne entitled "Journey into China", was approached by *The Age* Literary Editor, Tomas Muir, to write an article that he agreed to, though the article has not been traced. Prior to his departure, Cox had also undertaken to write an article for the *Medical Journal of Australia*, which was published later in the year.

Quite a substantial number of articles concerning the two trips appeared in the press, as well as a small separate publication, and there is little doubt that they played a role in further relaxing the Australian hardline position towards China.

This is an edited extract from "A Melbourne Doctor and his generation" by V Wehner (with M J Eadie and M S Wehner), Volkhard Wehner, Olinda, 2004.

The Editorial Board would like to thank Dr Geoff Kenny, the initiator of the Leonard Cox biography project, for his invaluable assistance in preparing this article.

Medical

Original Research

Sertraline response in Chinese and Caucasian depressed patients

Chee Hong Ng, Trevor Norman, Brian Ho, Isaac Schweitzer, Noor Jan, Agnes Fan, Steven Klimidis

Background

Sertraline (SRT), a new generation antidepressant medication, is a selective serotonin reuptake inhibitor (SSRI) that has no significant affinity for muscarinic, histamine H_1 and alpha$_1$-adrenergic receptors. It is indicated for the treatment of major depressive disorder and is also approved for the management of panic disorder, obsessive-compulsive disorder and post-traumatic stress disorder. It undergoes extensive first pass oxidation (via demethylation) in the liver, to form demethyl-SRT, which accumulates to a greater concentration than the parent drug at steady state. Demethyl-SRT is substantially less active than SRT *in vivo*. SRT demethylation *in vitro* is correlated with CYP3A3/4 isoenzyme activity to a greater degree than with CYP2D6 activity (Preskorn, 1997). In patients receiving the usual daily doses between 50 and 150 mg/day, steady state serum levels vary widely up to 15-fold (De Vane et al, 2002).

There are differences in the rate and relative capacities of extensive metabolisers (EMs) and poor metabolisers (PMs) across different racial groups. Although fewer Asians are PMs for CYP2D6, up to 50% of Asians are intermediate metabolisers (IMs) who have intermediate metabolic capacity, which is greater than that of PMs but less than that of EMs. Furthermore, up to 20% of Asians are PMs with CYP2C19 compared with 2-4% of Caucasians (Lin and Poland, 1995). Therefore, overall the Asian population has reduced metabolic rate for these isoenzymes, perhaps accounting for a higher prevalence of side effects from drugs metabolised by these pathways in this population. Lower doses of psychotropic medications are often more appropriate and adequate to produce efficacy (Lin and Shen, 1991).

There is currently very little data on efficacy and adverse reactions of SSRIs like SRT in Chinese patients as the majority of clinical drug trials are performed on Caucasian patients. Cross-ethnic studies are necessary in determining the appropriate clinical dose for optimal outcome in diverse ethnic populations.

Method

A study was conducted with two groups of Chinese depressed patients (from Australia and Malaysia) and a group of Caucasian depressed patients from Australia. All patients were at least 18 years old and had a diagnosis of major depressive disorder according to DSM-IV criteria with a minimum Hamilton Depression Rating Scale (17-item HDRS) score at baseline of 18. Exclusion criteria included co-morbid psychiatric disorders and significant medical diseases. Outcome measures included psychiatric assessment, physical examination, HDRS, Clinical Global Impression (CGI) and WHO Quality of Life Assessment-Brief version (WHOQOL-BREF) and Liverpool University Neuroleptic Side Effect Rating Scale (LUNSERS). SRT was given to patients initially at a fixed-dose of 50 mg/day for one week before they entered into a variable-dose phase when the dosages (25-200mg/day) were clinically adjusted according to response. The dosages, plasma concentrations and outcome measures were determined during the six-week treatment course and compared between the three groups. Sertraline concentrations in plasma samples were analysed by Gas Chromatograph Mass Spectrometer (GC-MS). The study was approved by the Melbourne Clinic Research and Ethics Committee and the relevant ethics committee in Malaysia.

Results

A total of 15 Australian Caucasian (A), 17 Australian Chinese (C) and 13 Malaysian Chinese (M) depressed patients were included in the analyses. The clinical

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characteristics including the mean age, height, weight, HDRS score and CGI score for the three ethnic groups were similar except for significant weight difference between A subjects (X=90.75) and both C (X=57.62) and M (X=61.27, p<0.001).

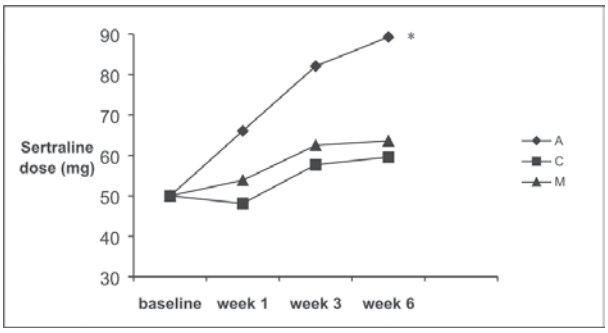
The mean SRT dose over the treatment course is shown in **Figure 1.** The mean dose levels increased across the weeks of the trial. The mean SRT dose over the 6-week treatment, after controlling for weight, was significantly different between groups in that A subjects received significantly higher dose than C group (p=0.002) and M group (p=0.012). No significant differences were observed between groups in HDRS score reduction, clinical global improvement, quality of life scores, and side effects rates. When correcting for the dose effect on efficacy using mean SRT dose as a covariate, significant difference was noted between A and C groups (F(1,25)=6.05, p=0.021). This suggests greater HDRS score reduction for a given SRT dose in C group.

In terms of mean SRT plasma levels, repeated measure over time ANOVA found a significant difference between ethnic groups (F(2,35)=4.98, p=0.012) after controlling for gender, weight and dietary factors. To account for the varying plasma levels due to differential dosages, the ratios of SRT plasma level to dose were calculated. However, this showed a lack of significant difference between groups (p=0.11). In terms of treatment response, the rates of response between ethnic groups are shown in **Figure 2.** The proportion of responders between each ethnic group was not statistically significant with Chi-square test (c^2=0.16, p=0.69). The rates of study withdrawal were higher in the C group (33.3%) and M group (26.7%) compared with the A group (6.7%).

Discussion

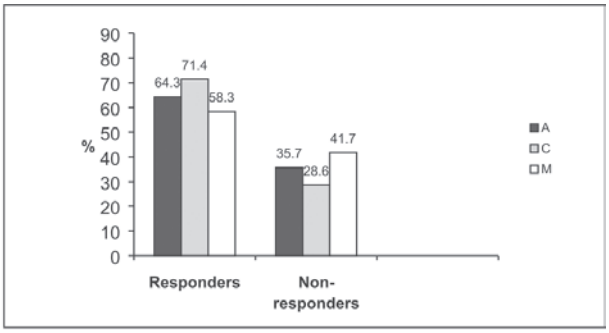
There is significant difference in the dose requirement for Chinese depressed subjects in both Australia and Malaysia, which was less than Caucasians despite correcting for weight. It appears that Chinese patients required lower dosage of SRT with corresponding lower plasma level when compare to Caucasian patients for adequate clinical efficacy. It may indicate that Chinese patients responded to at least the same or have greater therapeutic response for a given dose or plasma

Figure 1. Sertraline dosage and ethnic groups



A= Australian Caucasians; C=Australian Chinese; M=Malaysian Chinese; *p< 0.05

Figure 2 Rates of response between ethnic groups



Response = Drop of HDRS > 50% from baseline to endpoint; A= Australian Caucasians; C=Australian Chinese; M=Malaysian Chinese; Chi-square, p=ns

level. Other studies have found that Asian patients may be more sensitive to psychotropic medication (Lin et al, 1989). This suggests that previous findings that there is greater drug sensitivity in Asian populations in terms of therapeutic and side effects may also apply to newer SSRIs. Although there was a greater rate of study withdrawals in the Chinese groups, SRT resulted in similar therapeutic and adverse effects compared to the Caucasian group. It appears that SRT is not only effective for depression in both ethnic groups but is also well tolerated in both ethnic groups.

Another possible reason for lower dosage may be due to reduced drug metabolism in this ethnic group leading to higher plasma concentrations. However, the SRT plasma levels in Chinese subjects were not higher for any given dose as shown by a lack of difference in the SRT level to dose ratios between ethnic groups. Given that CYP2D6 and CYP3A3/4 systems are two main metabolic pathways for SRT metabolism, cross ethnic differences in the metabolism of SRT may still be possible. In PMs for CYP2D6, the CYP3A3/4 could be

the main metabolic pathway resulting in lower clearance of SRT and increased plasma levels. Furthermore, in IMs for either CYP2D6 or CYP2C19, SRT may further inhibit CYP2D6 and CYP2C19 activity and result in significant increase of plasma levels of drugs metabolised by either CYP2D6 or CYP2C19 respectively. However, one single dose PK study found that the metabolism of SRT was not altered in CYP2D6 PMs compared to EMs (Hamelin et al, 1996). Nevertheless, given the higher rate of reduced metabolism in Asian patients, they may have a higher plasma SRT concentration and corresponding greater adverse effects for a given dosage.

It is of interest that the dosage and clinical response to SSRI appear to be similar in both Chinese ethnic groups across different countries. The lack of difference between the C and M subjects may suggest that genetic factors may be more important than dietary and environmental factors in influencing drug metabolism. One study indicating significantly higher levels of haloperidol and greater prolactin response in Asians compared to Caucasians found no difference between American born and overseas born Asians (Lin et al, 1988). Further inter-ethnic studies across different environments and cultures need to be undertaken to clarify the relative impact of environment and genetic influence.

Limitations of study

Open label clinical studies may be subjected to clinician, rater and patient biases, which could confound the findings. Small numbers in this study may lack statistical power and have a greater likelihood of type 1 errors. Although dietary history including caffeine, alcohol and cigarette consumption was documented, there was a lack of systematic measurement of dietary factors that may affect metabolic activity of the CYP enzymes. Further adequately powered studies should consider such genetic diversity and dietary influences to clarify ethnic differences in psychotropic drug metabolism and response

Conclusion

Cross-ethnic variations in antidepressant response are clinically significant even for new generation antidepressant like SSRIs. Chinese depressed patients required lower SRT dosages than Caucasian patients to achieve optimal clinical efficacy. A dose-concentration relationship was observed and hence the Chinese patients required lower SRT levels for clinical response. For a given dose, Chinese patients appeared to have similar or even greater therapeutic effect when compared to Caucasian patients. Further systematic study of dosages and clinical response of SSRIs are needed in Chinese and other ethnic groups.

Acknowledgement

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Editor's Note:

Dr Ng is the first recepient of a scholarship programme initiated by the ACMAV in 2000 to fund original research.

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Common vulval dermatoses

Belinda Welsh

Introduction

Vulval itch and/or pain in women is common. Patients presenting with this symptom can have a long history involving visits to several doctors, including general practitioners, gynaecologists and dermatologists. Symptoms in this area often have a profound impact on the patient's life. Excoriation, rubbing, maceration, secondary infection and the effects of topical applications frequently complicate matters. The cause of vulval symptoms can often be multi-factorial but with careful assessment a primary diagnosis can be reached in most cases. A good history requires patience and gentle direct questioning, as patients often feel uncomfortable discussing their problems and may not disclose self-applied remedies. Care should be taken during examination, as vulval rashes may be subtle. **All** patients should have a low vaginal swab to diagnose candidiasis rather than treating empirically. Any dermatosis not responsive to treatment should be biopsied and reported by an experienced Gynaecological pathologist.

Eczema/Dermatitis

Eczema and dermatitis are synonymous terms. Whitening and thickening of the skin develops with chronic rubbing and scratching and is termed lichen simplex chronicus. Dermatitis is the most common cause of chronic vulval itch. The major categories of dermatitis include: atopic dermatitis, irritant contact dermatitis, allergic contact dermatitis, and seborrhoeic dermatitis. Multiple causative factors are often present in the one patient.

Aetiology

Irritant reactions are common on the vulva, and there may be a background of atopy (eczema, asthma, hayfever). Irritants include soaps, shower gels, bath products, condoms, commercial lubricants and deodorant sprays. In the early stages Candida is often diagnosed (by the patient, friends or doctors) and topical creams applied that are irritant in themselves, compounding the problem. Other aggravating factors include urinary and faecal incontinence, heat, friction and stress. Allergic reactions are less common but need to be considered if there is poor response to treatment. Possible allergens include fragrances, corticosteroids and other medicaments.

Clinical Features

Itch is the predominate symptom despite the aetiology. Burning will occur if the mucosal surface is involved, and fissures can lead to pain and dysparunia. Clinical signs need to be sought carefully as they may be subtle such as interlabial erythema or small skin splits. Poorly defined erythema with or without scale, may extend onto the pubis and thighs (photo 1). Thickening and whitening of the skin (lichenification) with multiple small excoriations can be seen in more severe longstanding cases. Unlike lichen sclerosus normal anatomy is preserved and the vagina is normal. Tinea should be considered in the differential diagnosis of dermatitis. Toenail and foot involvement is a helpful clue.

Management

Principles of management is that of most vulval diseases and includes:

- Patient education and environmental modification (see Table) – this is of vital importance as control rather than cure is usually the realistic aim. Avoiding washing with soap should be emphasized.
- Treat any secondary infection
- Management of incontinence

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- Bland, non irritating moisturizer (eg aqueous cream, petroleum jelly)
- If moderate to severe a potent topical steroid (methylprednisolone aceponate) is recommended initially and use until symptoms have resolved (generally 4-6 weeks)
- Follow with 1% hydrocortisone for maintenance if required
- Recycling back to the more potent steroid may be necessary for flares

Psoriasis

Clinical features

Vulval psoriasis may occur in this area alone or with more generalised disease. It is generally not nearly as itchy as dermatitis but may be in children. The typical salmon red scaly well defined patches are seen in the pubic area, but on the vulva the scale is usually absent (Photo 2). The bright erythema is typical; the natal cleft is often involved but the vagina is not.

Management

Again good vulval skin care is important. Bland emollients such as aqueous cream are useful. Mild topical steroids such as 1% hydrocortisone will often control itch but stronger preparations such as methylprednisolone aceponate (Advantan Fatty Ointment) may be needed cyclically . Weak tar preparations such as 3% liquor picis carbonis (LPC) in aqueous cream can be used to allow breaks from topical steroid use. Dithranol and calcipotriol (Daivonex) preparations are too irritant for the vulva. It is essential to explain the chronic nature of psoriasis.

Lichen Sclerosus

Aetiology

Lichen sclerosus (previously know as lichen sclerosus et atrophicus) is an uncommon inflammatory skin disease of unknown cause. It has a predilection for genital skin and although seen in both sexes, is more commonly reported in women. It can affect all age groups. Lichen sclerosus has been reported in association with a number of autoimmune conditions. Patients, however, do not seem to be at continued excessive risk of developing autoimmune disease so an exhaustive search for these diseases is not mandated.

Clinical Features

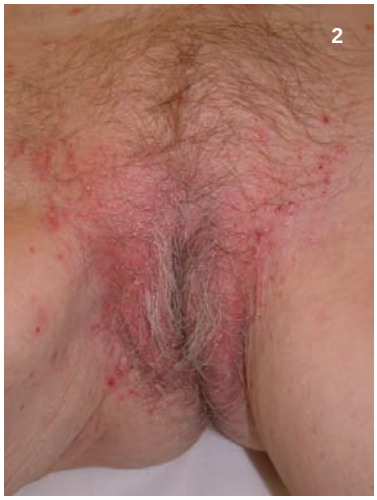
Symptoms include pruritus, soreness, burning, dysparunia and especially in children, constipation. It may occur anywhere over the vulval, perineal or perianal skin and rarely at extragenital sites. Typical features include well-defined white plaques with an atrophic wrinkled surface. Telagiectasia, purpura, hyperpigmentation, erosions, fissures and oedema of the clitoral foreskin may also be seen. As the disease progresses fusion of tissues leads to gross distortion of the normal architecture. The labia minora disappear, the clitoris is buried and the introitus is narrowed (Photo 3). This can result in sexual difficulties and urinary problems. The vagina is not affected. This diagnosis should be confirmed by skin biopsy. Although not itself considered a premalignant condition longitudinal studies suggest a roughly 4% (reports range from 1-11%) lifetime risk of the development of squamous cell carcinoma within affected skin in patients with vulval lichen sclerosus. At this stage it is not known if treatment decreases the risk.

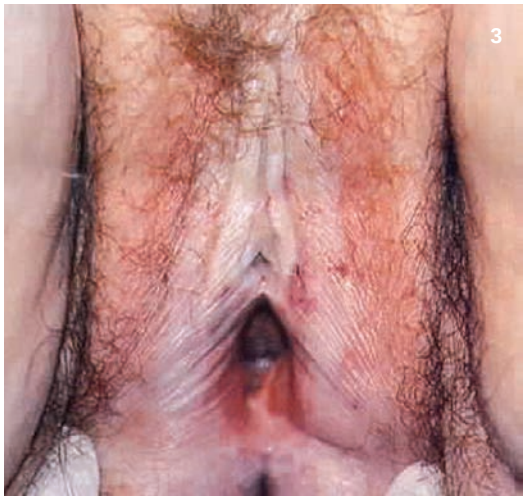
Management

The aims of treatment are;

1) Control of symptoms such as itch, soreness, and dyspareunia
2) Minimisation of scarring and alteration of normal vulval architecture
3) Lifelong 12 monthly surveillance for squamous cell carcinoma of the vulva

Potent topical steroids are the mainstay of treatment in adults and children and response is usually rapid. Betamethasone diproprionate 0.05% ointment in optimised vehicle (Diprosone OV) is used initially twice daily for a month, then daily for two months and gradually tapered to an as needs basis ideally only once or twice per week. If symptoms flare candida and bacterial swabs should be performed to exclude coexist-





1. Lichen planus with red eroded areas around the posterior fourchette.

2 Psoriasis extending on to the pubic area and groin

3. Lichen sclerosus showing atropic white skin, purpura, and architectural change (narrowing of the introitus, loss of labia minora, fusion of the clitoral hood)

4. Dermatitis

Good vulval skin care

1 Avoid soap:	- Soap substitutes: aqueous cream, sorbolene cream, emulsifying ointment - Specific shower/bath lotions that are soap free - Bath oils for very dry skin - Plain or salt water (2 teaspoons per litre)
2. Avoid overwashing:	Once daily is sufficient, keep the shower or bath short and the water not too hot.
3. Avoid overheating:	In particular hot restrictive nightwear, bedding, underwear or tight clothes.
4. Avoid wool/nylon	Cotton is best next to the skin.
5. Sexual lubrication	Own lubrication is best. If this is not possible oil (vegetable, almond) can be used, but can make condoms weaker and less effective. Other proprietary products are available and can be used but may be irritating so rinse off after use and apply moisturiser.

ent pathology. Surgery is best avoided unless malignant change has been shown but may be required for sexual or urinary problems.

Lichen Planus

Clinical findings

This is a rare condition but is important in that it affects the vagina and if undiagnosed and untreated can lead to adhesion formation. The cause is unknown. It usually presents in the vulvo-vaginal area with painful red patches and erosions in middle aged women (Photo 4). Elsewhere on the skin it is characterized by polygonal purplish papules and plaques, with a fine white scale on the top. These may be seen on the outer vulva. The vulval and vaginal erosions may be limited to one or two small patches to a severe desquamative vaginitis which can lead to scarring and adhesion formation. Symptoms include itch, pain, postcoital bleeding and discharge. The mucosal surfaces of the mouth can also be affected with lacy white areas, white plaques, erosions and/or gingivitis. Biopsy is necessary to confirm this diagnosis.

Management

Potent topical steroids as for lichen sclerosus are the mainstay of treatment. These often need to be delivered via an applicator to reach the vaginal walls. Rectal 10% hydrocortisone acetate has also been used. Topical tacrolimus has shown some early success in limited series. Again good vulval skin care is important. If adhesion formation has developed surgery and vaginal dilators may be required. Malignancy is a recognised complication in oral and vulval erosive lichen planus and follow-up is mandatory.

Conclusions

Vulval conditions require an empathetic approach and time is often needed to gain a complete history and examination. It needs to be remembered several conditions may co-exist and swabs to exclude Candidiasis is important in all patients. Persistent erosions, fissures, warty plaques or nodules may be due to malignant conditions; biopsy is mandatory.

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Screening for ovarian cancer

Debbie Neesham

Magnitude of the problem:

Around 1% of all Australian women will develop ovarian cancer in their lifetime, thus around 1200 cases per year are diagnosed in Australia every year. It has a very high mortality due to the fact that most ovarian cancers are advanced stage at diagnosis, and it is the commonest cause of death from gynaecological malignancy with 750 women per year dying of ovarian cancer in Australia. It is the fourth commonest cause of death from cancer in women. 70% of women diagnosed with ovarian cancer will die of this disease, compared to 70% with breast cancer will survive their disease. The reason for this is our inability to effectively screen for the disease or to diagnose it in its early stages, when cure is more likely. Diagnosis for 2/3 of women occurs when the disease is advanced, and cure rates are around 10-15%. The main risk factors for ovarian cancer include a family history and age. Protective factors include the use of the oral contraceptive pill which reduces risk by 50% with 5 years of use, hysterectomy, tubal ligation, and increased parity.

Early diagnosis relies on a high index of suspicion when symptoms are often vague and non specific. "If in doubt rule the ovaries out".

Only 5-10% of ovarian cancers are thought to have a hereditary basis such as BRCA 1, BRCA 2 or mismatch repair gene mutations as in Hereditary Non-Polyposis Coli (HNPCC). The majority of these hereditary cancers (around 90%) are associated with BRCA 1. The remaining 90-95% of women diagnosed with ovarian cancer have no family history. If a woman has a first degree relative with ovarian cancer then her own lifetime risk of ovarian cancer rises threefold.

Screening for ovarian cancer

No true precursor lesion for ovarian cancer exists, so early diagnosis is the current aim of screening. Research is aimed at finding an early detection marker or even a precancerous marker in serum or urine. Any screening test will require excellent sensitivity and specificity. The current methods used still require 5 operations to diagnose 1 cancer in high risk post-menopausal women(1). To date there is no evidence to show reduced mortality from screening although some data do indicate a survival advantage (2).

Current screening tools

Ca 125 is a serum antigen which is elevated in 80% of women with ovarian cancer but unfortunately in only 50% of women with stage 1 disease. It is also elevated for many other reasons particularly pre-menopausally when it can be elevated in endometriosis, pelvic inflammatory disease, pregnancy and with menstruation or fibroids, thus alone it is relatively insensitive and not specific. Postmenopausally it can also be raised in other cancers particularly from the genital tract, but any cancer which affects the peritoneal cavity can elevate the Ca 125, as can renal, liver or cardiac failure. It will also be raised in any inflammatory condition such as diverticulitis, pancreatitis, hepatitis etc.

Ultrasound

Ultrasound alone is non-specific and leads to overinvestigation. Used in conjunction with Ca 125 estimation it provides useful information including ovarian volume, solid components to any cyst, Doppler blood flow to any solid area (looking for evidence of neovascularisation) and presence of ascites. Transvaginal scanning in a tertiary setting is the preferred method.

Community screening

Given that 90-95% of ovarian cancer occurs in women with no family history, large trials in England, US and Japan are currently underway to assess the use of Ca

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125 and/or ultrasound in screening the whole post-menopausal population. Three trials started in the early to mid 1990's involving population screening of post-menopausal women with various combinations of ultrasound and Ca 125 are awaiting completion. These will help to decide whether, using current tools, ovarian cancer screening is possible and cost-effective in the general community.

High risk population screening

For the 5-10% of women with a BRCA 1, BRCA 2 or HNPCC gene mutation at high risk of ovarian cancer with an accumulated risk of 45% for BRCA 1, 25% for BRCA 2 by the age of 70 and 10% for HNPCC, screening is usually recommended. It is usually thought that these inherited ovarian cancers occur at an earlier age. This appears true for BRCA 1 with an average age of 52 years, however the average age of diagnosis of BRCA 2 related ovarian cancer is 62 years, the same as the normal population with ovarian cancer. HNPCC mutation carriers however have an accumulated risk of ovarian cancer of 10% with an average age at diagnosis of 42 years.

Current recommendations for screening in high risk women

Despite limitations the current recommendations are for an annual or biannual Ca 125 and transvaginal ultrasound with a pelvic examination. There is still no data that screening is of any benefit to these women and should only be conducted after appropriate genetic counseling.

Options for management of women at high risk

Bilateral salpingo-oophorectomy reduces the risk of epithelial ovarian cancer by 90%. It cannot completely remove the risk because 10% of ovarian cancers arise within the peritoneal cavity, which is a coelomic derivative embryologically, (as is the ovarian epithelium). These are considered to be primary peritoneal carcinomas, which behave exactly as ovarian cancers. Possibly more importantly it has now been shown that BRCA 1 genetic mutation carriers who elect to have prophylactic oophorectomy also reduce their risk of breast cancer by 50% (3, 4). This now forms an important component of advice given to these women.

Familial cancer clinics and genetic testing

In practice gene mutation detection is not easy. It is often not possible to detect a gene mutation even when the family is considered to be at high risk of a genetic mutation with regard to the family history. It may also take many months. For those families in whom a genetic mutation can be found, other family members can be easily tested, but this raises medical, surgical, ethical, and emotional issues and also the financial and insurance aspects need to be considered. Throughout Australia, Familial Cancer Clinics exist to advise on the risk of there being a hereditary cancer, and then can address the other issues arising from these discussions. They provide counseling and support, information about the early detection of cancer, and, if appropriate, offer testing.

Patients who should be referred include:

1. Women with 2 or more first or second degree relatives with either breast or ovarian cancer with any one of the following associated fea tures:
   - Additional relatives with breast or ovarian cancer
   - Breast cancer diagnosed under 40 years
   - Ovarian cancer diagnosed under 50 years
   - Bilateral breast cancer
   - Breast and ovarian cancer in the same woman
   - Jewish ancestry
   - Breast cancer in a male
2. Women with 3 or more first or second degree relatives with early onset (<50 years of age) of bowel cancer, bowel cancer generally, endometrial cancer, ovarian cancer, gastric cancer, and renal cancers.

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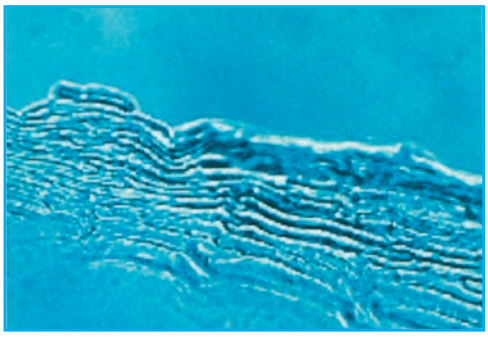
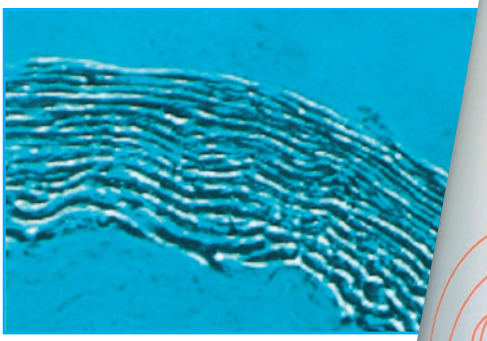


Weakened barrier



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(1) J Invest Dermatol 1991 ; 96 : 523-526.
(2) J Invest Dermatol 1996 ; 106 : 1242-1249.
(3) J Am Acad Dermatol 1989 ; 21 : 557-563.

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Conclusions:

Ovarian cancer is an important cause of mortality in Australian women. Screening for ovarian cancer is not currently recommended for the general community, but is undergoing investigation in women at high risk of ovarian cancer due to strong family history. These women are best managed through familial cancer clinics. Screening methods still centre around ultrasound and serum Ca125 test, as early detection is the aim. Prophylactic oophorectomy should be considered after childbearing as this reduces the risk of ovarian cancer by 90% and also reduces the risk of breast cancer by 50% in known mutation carriers.

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Human papillomavirus (HPV) testing – How does it fit in with clinical practice?

Sepehr N. Tabrizi

Carcinoma of the uterine cervix is the second most frequent cancer in women after breast cancer worldwide. Since the initial reports by Harald Zur Hausen in 1970's, suggesting a role for human papillomaviruses (HPV) in aetiology of cervical cancer, there have been a number of molecular, epidemiological and clinical observational studies implicating the causal association of HPV in carcinogenesis of cervical cancer. In 1995, the consensus conference of the International Agency of Research on Cancer in Lyon, France concluded that certain HPV types are carcinogenic to humans.

Unavailability of suitable culture technique for HPV has made detection and diagnosis of this virus to be dependent on molecular biological means. With advancements in the detection methodology, mainly through the use of amplification technology, it has been possible to detect low-level virus copy numbers in clinical samples. Analysis by such sensitive methods of cervical cancers from different regions of the world have shown presence of HPV DNA in over 95% of carcinomas studied.

Typing, through comparison of viral sequence and comparison of genetic homology of the viral genomes, has shown HPV to be very heterogeneous with presence of over 100 HPV genotypes. Biologically, HPV types are divided into two groups: cutaneous and mucosal. A subset of about 40 genotypes appear to regularly infect the genital/mucosal epithelia with the remaining infecting the cutaneous warts and lesions. Mucosal HPV types such as 6, 11, 42, 43, 44, 53, 54, 55, 62 and 66 are mainly found in low-grade lesions including condylomas and almost never in cervical cancer and have been designated "low-risk" HPV types. Genotypes such as 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59 and 68 are found regularly in cervical cancer and have therefore been designated "high-risk" HPV types. Up to 80% of cervical cancers will have only 4 types of HPV among these high risk types, i.e. HPV 16, 18, 31 and 45. Epidemiological studies and current ongoing vaccine clinical trials require the reliable and reproducible identification of genital HPV. A number of molecular methods have been utilized in detection of HPV in clinical samples.

***Sepehr N. Tabrizi** MS, Ph.D.*

Senior Fellow, Department of Obstetrics and Gynaecology, University of Melbourne and Senior Research Scientist, Department of Microbiology, The Royal Women's Hospital

Two methods, currently being used diagnostically in most of the testing laboratories, are polymerase chain reaction (PCR) and Hybrid Capture (HC) II system (Digene Corporation). Hybrid Capture II (HC) is an FDA approved signal amplification assay based on solution hybridization of long synthetic RNA probes complementary to the genomic sequence of five low-risk (6, 11, 42, 43, 44) and 13 high-risk (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, and 68) HPV types. The sensitivity of the assay is equivalent to 5000 copies of HPV. To reduce time and cost of the test, generally only the high-risk probe mixture is used. This assay can be used to test cervical specimens collected with the Digene Cervical Brush Sampler or cervical biopsies placed in Digene Transport Media. Samples collected for liquid based cytology systems can also be tested using HC.

The other method utilized frequently for HPV detection is polymerase chain reaction (PCR). PCR is a selective target amplification assay capable of exponential

HPV Types

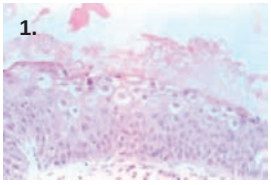
- Two major phylogenetic branches, differing affinities for site of infection
- Cutaneous: Keratinized squamous epithelium
- Mucosal: Non-keratinized squamous epithelium – About 40 mucosal types

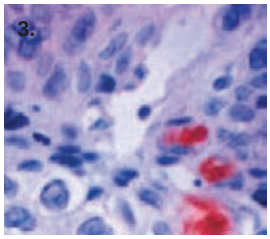
and reproducible increase in the HPV sequences present in the biological specimens. The amplification process of PCR can theoretically produce one billion copies from a single molecule after 30 cycles of amplification. The sensitivity of 1-10 copies per PCR reaction is achieved by most utilized methods. Most laboratories have been using in-house assays for performing PCR, however before the end of 2004, commercial approved assays similar to HC will be available which would allow better consistency with the test performance.

Some of the suggested potential roles for HPV DNA testing include use of this test as a screening tool, triage of women with low-grade or borderline smears and as a means to follow patients with HPV-related disease after treatment.

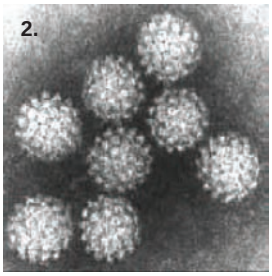
Detection by microscopy

1. Cytological and Histological





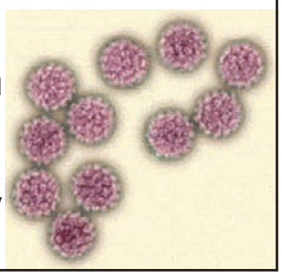
2. Electron Microscopy



3. Immunohistochemistry (group specific antigen)

Papillomaviruses

- Non-enveloped dsDNA viruses
  - Circular genome~8 kb
  - 55-nm spherical capsid coat
- Widely distributed in higher vertebrates
  - Tight species specificity

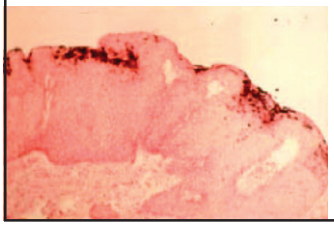


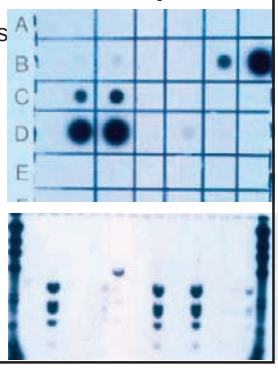
The utility of HPV testing as a primary screening method is still under investigation and its effective incorporation into the current screening methodology is being debated in Australia. Higher sensitivity of HPV testing when compared to cytology for detecting high-grade cervical abnormalities would suggest that introduction of such testing would reduce the amount of untreated high-grade CIN. However HPV tends to be transient and cleared in majority of younger women spontaneously. Since most of cervical cancers are caused by persistent infection with high-risk HPV types, universal incorporation of HPV testing for all women will identify women who might not necessarily develop high-grade lesions or cancer. Incorporation of HPV test for older women, however, has been suggested to have a better predictive value for detection of cervical abnormalities without substantially increasing the proportion of women unnecessarily referred for colposcopy.

Evaluation of role of HPV testing in management of borderline and low-grade cervical smears has been the topic of a number of studies. Borderline smears account for a large number of abnormal Pap smears. The clinical management of this diagnosis is not clear as majority of these smears reflect a benign reactive process. However, it has been estimated that about one-third of all high-grade lesions in a routine screening population are found within or precede a borderline cytology diagnosis. Incorporating HPV test can detect 96.9% of women with high-grade cervical disease compared with 75.8% using the traditional method of repeat Pap testing alone. Possibility of implementing liquid Pap collection methods allows for samples to be reflex HPV tested in all borderline without the need for women to

Molecular Detection Techniques

- Non-amplification methods
  - in-situ Hybridization
  - Dot blot, Reverse
  - Southern, northern blot





Clinical sample type

- **Women**
  - low vaginal swab*
  - ecto/endocervical swab
  - high vaginal swab
  - cervico-vaginal lavage*
  - first void urine (FVU) *
  - tampon*
  - mini menstrual pad *
  - Biopsy

* (self collected)

- **Males**
  - FVU
  - urethral swab
  - swab “genital sweep”
  - “Emery board” genital sampler

undergo a further examination. A similar diagnostic triage for women with low-grade Pap smears has been suggested as an alternative means to colposcopic evaluation of all women with CIN I.

Role of HPV testing as a post-treatment surveillance marker has also been proposed. Detection of HPV DNA can be utilized as the means to detect incomplete excision of affected area by monitoring the presence and level of HPV present. Such a marker can aid in reducing the surveillance frequency and length. Although there is a need for long term studies in assessment of incorporation of HPV testing in reduction of incidence of cervical

What test to use?

- screening
- triage of equivocal/ borderline Paps
- monitor post dysplasia treatment
- epidemiological studies
- surveillance geographical areas
  - HPV prevalence
  - HPV genotype prevalence
- pre and post vaccine implementation
  - vaccine efficacy trials
  - different regions worldwide

Hybrid Capture II Assay

- Current FDA approved test – 1995 tube format; 1999 micro-titer format
- Designed to work with exfoliated cervical sample
- Recommended collection kit includes brush and sample transport media– Collects endo- and ectocervical cells
- 5% of total specimen assayed for each probe group

cancer, it is clear that HPV testing has a clear role in management of women with equivocal and low-grade abnormalities. The HPV testing including HCII is currently available in Australia at a non-rebatable cost of approximately $80 for detection of high-risk types. However this cost varies from laboratory to laboratory and it is envisaged that it will be reduced with increased number of testing.

Postmenopausal Bleeding

Adrian Kwok

Menopause is defined as the permanent cessation of menses, which occurs after the cessation of ovarian function and is diagnosed retrospectively after 12 months of amenorrhoea. The average age for menopause is around 50 years and is associated with elevated FSH levels and reduced levels of estrogen. The peri menopause is the period around the menopause. The duration of this period may be brief or last for several years and may be associated with symptoms resulting form declining ovarian function such as vasomotor symptoms or menstrual irregularity.

Postmenopausal bleeding is not considered a normal condition and it may be a sign of underlying malignancy or a pre malignant condition. Abnormal postmenopausal bleeding probably results commonly from hormone replacement therapy (HRT), however it has been reported that 15% of women with postmenopausal bleeding who are investigated have endometrial carcinoma. However, it is important to note that these figures refer to cases that were actually referred to hospital and may reflect only a small proportion of actual cases of postmenopausal bleeding in the community, This is supported by a recent study (Astrup et al)(2) which suggested that postmenopausal bleeding in the first year after menopause is very common with an incidence of 409/1000 person years, and the rate rapidly declined to 42/1000 after three years of amenorrhoea and that most patients did not seek medical advice. Those with bleeding after first year after menopause are less likely to have a malignancy compared to those with spontaneous bleeding years after.

Another common cause of postmenopausal bleeding is atrophic endometritis or vaginitis as a result of low estrogen levels. These cases are likely to occur spontaneously or as a result of trauma. The causes of postmenopausal bleeding are listed in Table 1. It is also important to note that abnormal bleeding in the peri menopause is also common and it is estimated that menstrual irregularity occurs in almost half of all women. The bleeding may be irregular, heavy or prolonged. Abnormal bleeding in the peri menopause is less likely to be of a malignant or pre malignant cause and is usually as a result of anovulatory cycles, which is part of the declining functioning of the ovary. All women with postmenopausal bleeding should be evaluated and investigated for malignancy. Women with chronic anovulation or are obese or have had unopposed estrogen hormone replacement therapy stand an especially increased risk of neoplasia. Women with persisting abnormal peri menopausal bleeding especially if heavy or irregular should also be evaluated however the risk of malignancy is less in this group compared to the post menopausal group with bleeding.

Table 1 - Aetiology of Postmenopausal bleeding (Hacker et al)(1)

A thorough medical history is important in particular the nature of the bleeding and the duration must be ascertained. Symptoms of hypo-estrogenic effect may be useful such as dryness of the vagina, history of any trauma, as well as any drugs, which may predispose to bleeding such as exogenous hormones or Warfarin. It

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is also important to ascertain a history of any urinary and bowel functions. Occasionally bleeding through the urethra or rectally may be confused with postmenopausal vaginal bleeding. A full general medical history is also required and in addition a gynaecological history including a full Pap smear history is important.

After this a full physical examination should be performed and in particular a gynaecological examination would include close inspection of the vulva, vagina and cervix. In particular atrophic effects may be noted by thin walled, pale and non-pliable vaginal skin. Any points of bleeding from trauma or laceration should be observed, as well as any other sources for points of bleeding such as polyps on the cervix. A Pap smear should be taken Bimanual examination is important to ascertain any ovarian lesions or uterine enlargement. Subsequent investigations depend upon the setting. The peri menopausal group a BHCG may be important to exclude pregnancy and haemoglobin is important for those with heavy bleeding. Pelvic ultrasounds are now a common modality in gynaecological practice. They may reveal fibroids or more importantly endometrial lesions such as endometrial thickening or polyps. They may also find ovarian cysts or tumours. Postmenopausal women that are not taking HRT should have an endometrial thickness of less than 5mm. An endometrial thickness of d" 5mm (Both layers together) makes endometrial neoplasia or, hyperplasia very unlikely however it cannot exclude it. Hence in almost every case of postmenopausal bleeding and also many cases of persistently abnormal perimenopausal bleeding some form of endometrial sampling is required.

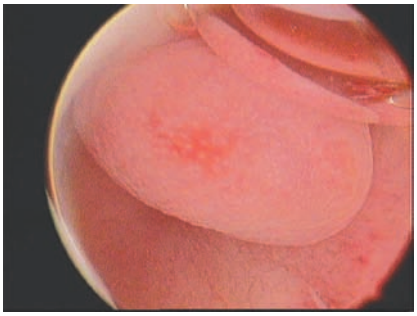
The gold standard is a formal hysteroscopy and dilatation and curettage or the uterus. This may be performed in the rooms with regional anaesthesia using 2mm hysteroscopes. However they are more commonly performed under general anaesthetic in Australia. During this procedure the uterine cavity is distended using either normal saline or carbon dioxide gas. The shape of the cavity is noted and the endometrium may be viewed directly with fiberoptic illumination or via an endoscopic camera transmitting an image to a display screen. Any submucosal fibroids or endometrial polyps should be instantly visible.

Hysteroscopy is thus superior to a blind D&C. After visualisation of the endometrial cavity, polyps may be removed with polyp forceps and the lining of the endometrium may be sampled with a curette.

The endometrium may also be sampled with narrow, disposable plastic suction aspirators such as the "pippelle" endometrial aspirator. This device which is obtained inexpensively may be inserted through the cervix after antiseptic solution is applied. Once the tip is at the fundus, the internal plunger is withdrawn to create a partial vacuum and with forward and backward movements of the pippelle and its withdrawal a specimen is usually obtained. A normal histology with an endometrial thickness of less than 5mm would be almost as accurate as a hysteroscopy and D and C. However it is not always possible especially in tight cervices either form menopause, or nulliparity. The procedure also may be painful in some instances and thus not possible to complete. In these cases, formal hysteroscopy and D and C are required.

Management of postmenopausal bleeding will then depend on the pathology. Cases of frank malignancy should be managed by specialist Gynaecologists, often gynaecological oncologists. Postmenopausal bleeding may also result from endometrial hyperplasia. The histological pattern may be described as simple or complex depending on the shape of the glands. Each pattern may contain cytological atypia. Those which are shown to have atypia are much more likely to become malignant. (Simple hyperplasia 1% progression, Complex hyperplasia 8%, Atypical simple hyperplasia 8%, atypical complex hyperplasia 29%.) There is thus significant malignant potential of atypical hyperplasia. In addition, there is a 25% (3) risk of coexisting endometrial cancer in those with endometrial sampling showing atypical hyperplasia. For these reasons, hysterectomy is often the preferred treatment. Those with endometrial hyperplasia without atypia will usually respond to progestin therapy and should be monitored with further endometrial sampling.

In cases of postmenopausal bleeding as a result of hypo oestrogenic atrophy, oestrogen therapy is helpful. In those women with abnormal bleeding on HRT, change



Endometrial Polyp (Hysteroscopy)

of regimen is a common approach, however once again malignancy should be excluded with Pap smears and endometrial sampling.

Bleeding as a result of benign polyps, either on the cervix or endometrium usually ceases with their removal. Women taking tamoxifen therapy for breast cancer may develop large fleshy and often benign endometrial polyps which may result in bleeding. However tamoxifen may predispose to endometrial malignancies which need to be excluded.

Irregular and heavy bleeding in peri menopause is not an uncommon finding. Pregnancy must be excluded. The risk of endometrial hyperplasia and malignancy is less than that of the postmenopausal group however if symptoms are more than brief, investigation and endometrial sampling is warranted. After these have been excluded, symptoms may be controlled hormonally with progestin therapy, oral contraceptive pill unless contraindicated and with progesterone releasing intrauterine devices. Benign underlying causes such as polyps and fibroids may be removed. Submucosal fibroids are those most implicated in causing menorrhagia and may be amenable to resection by the transcervical route. Other forms of surgical treatment may include endometrial ablation or hysterectomy.

In summary, postmenopausal bleeding is probably more common than we think and often goes unreported. For those that seek medical attention, a significant number may have an underlying malignancy. All cases thus require investigation. A pap smear should be performed. Ultrasound showing an endometrial thickness of less than 5mm in those not taking HRT makes malignancy unlikely and this in conjunction with a normal endometrial aspirate is reassuring. Hysteroscopy and D and C is the gold standard.

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Pap test tips

Stella Heley

The Pap Smear ("Pap Test" as it is propularly referred to) is a test for detection of cancer of the servix in women. Gynaecologists and General Practitioners(GPs) perform the procedure to obtain cell samples for cytology. Some tips may be helpful.

Tip No.1: What instruments should I use? (see flowchart)

Taking an adequate Pap smear may seem like a simple procedure. But the different instruments that are available confuse many doctors.

Squamous cell cervical cancer arises at the cervical transformation zone (TZ): the point where the columnar epithelium of the endocervix meets and transforms into the squamous epithelium of the ectocervix and vagina. The position of the TZ varies at different times of a woman's life according to the influence of oestrogen. In pre-menopausal women the TZ is relatively low; often seen as an eversion or ectropion. In menopausal and post-menopausal women the converse is found and the TZ is often quite high in the canal.

When we take a Pap smear we aim to sample the TZ. A spatula and cytobrush can be used for non-pregnant women of any age (use of the cytobrush is not recommended during pregnancy). A Cervex Brush (see diagram) on its own is usually adequate in pre-menopausal women. In older women it's important to always add a cytobrush sample as this will reach a little higher into the canal.

Tip No. 2: When should I add liquid-based Cytology?

It is not necessary to add liquid-based cytology (LBC) to every woman having a Pap test, though we do recommend that you give all women some information about LBC (this can be found in the VCS Pap test information pamphlets.) I recommend addition of LBC in the following instances:

1. After an unsatisfactory smear. Unsatisfactory smears occur for a variety of reasons including inflammatory exudate, cytolysis, or insufficient cells. Always wait at least 4 weeks before you repeat a smear. Adding LBC is not a guarantee of a satisfactory repeat smear, but may help.
2. If you have to take a smear in the presence of discharge, blood or excessive mucus. In these cases you run the risk of an unsatisfactory result. Adding LBC may decrease this risk.
3. If a woman specifically requests this additional test.

Remember that you must only use plastic instruments if you are adding LBC. If you are just taking a conventional Pap test the woman does not need to sign a VCS form, but if you are adding LBC, please tick the box marked "ThinPrep" & ask the woman to sign as an acknowledgement that VCS will send her an account for $36.

Tip No. 3: Should we be taking pap tests in sexually active teenagers?

The majority of cases of cervical cancer in Australia occur in women over the age of 50: 85% of women in Australia who develop cervical cancer have either not

STELLA HELEY

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had a smear or have a history of inadequate screening in the prior 10 years. Recruitment (especially of women over the age of 50) is currently the "weakest link" in the cervical screening pathway.

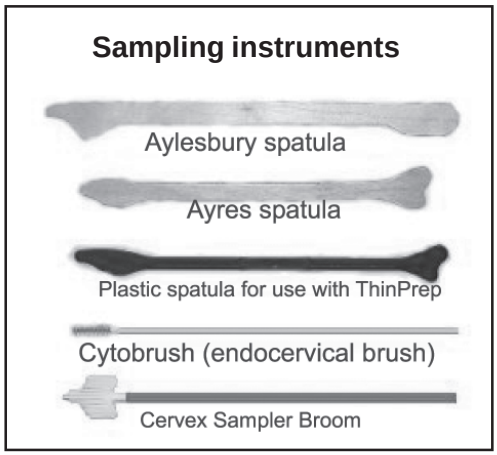
Minor abnormalities (usually associated with Human Papillomavirus [HPV] infection) are very common in women in the first 10 years of sexual activity. The vast majority of these changes are completely transient.

The National Guidelines recommend that Pap tests commence between the ages of 18-20, or 1-2 years after commencing sexual activity, ***whichever is later.***

Occasionally you may consider it necessary to take a Pap test in a woman under the age of 18, but my advice is that in general we should concentrate on other important sexual health issues in teenagers such as contraception/preventing unwanted pregnancies, and testing for chlamydia. The latter can be performed on urine (the first 4-5 mls passed). This means that in a young asymptomatic woman you do not need to do a speculum examination.

Tip No. 4: Do virgins need pap tests?

The World Health Organization states that "HPV is a necessary but insufficient cause of cervical cancer" i.e. you must have HPV to develop cervical cancer (keep in mind that this usually takes 10-20 years), but remember that up to 80% of the community will be infected at some time with HPV, and that **in the vast majority this will be a transient harmless infection**.



There are about 50 types of HPV that specifically infect the genital area. Genital HPV is spread by genital skin-to-skin contact. This does not always have to be penile-vaginal intercourse: lesbians need Pap tests in exactly the same way as heterosexual women.

But women who have never had any sexual contact with anyone do not need Pap tests.

Tip No. 5: How important is it to get an endocervical component?

Squamous cell cervical cancers arise at the cervical transformation zone (TZ): the point where the columnar epithelium of the endocervix meets and then transforms into the squamous epithelium of the ectocervix and vagina. The position of the TZ varies at different times of a woman's life according to the influence of oestrogen. In pre-menopausal women the TZ is relatively low; often seen as an eversion or ectropion. In menopausal and post-menopausal women the converse is found and the TZ is often quite high in the canal.

When we take a Pap smear we aim to sample the TZ, but this isn't always possible. Always use the cytobrush (in addition to the spatula) in a post-menopausal woman (where the TZ may be relatively high), but **please make sure you can always see the bottom 2 rungs of the brush when you insert it into the canal.** Some practitioners think they need to push the cytobrush right into the canal if the woman has not had an endocervical component on her last smear. Unfortunately this sometimes leads to the collection of endometrial cells! Endometrial cells can mimic a high-grade lesion, so we really don't want you to collect them!

As long as you have seen & sampled the cervix, & put part of one of your sampling instruments into the canal, a repeat smear in 2 years is fine, taking into account the woman's previous history.

Tip No. 6: Contact us if you have a query

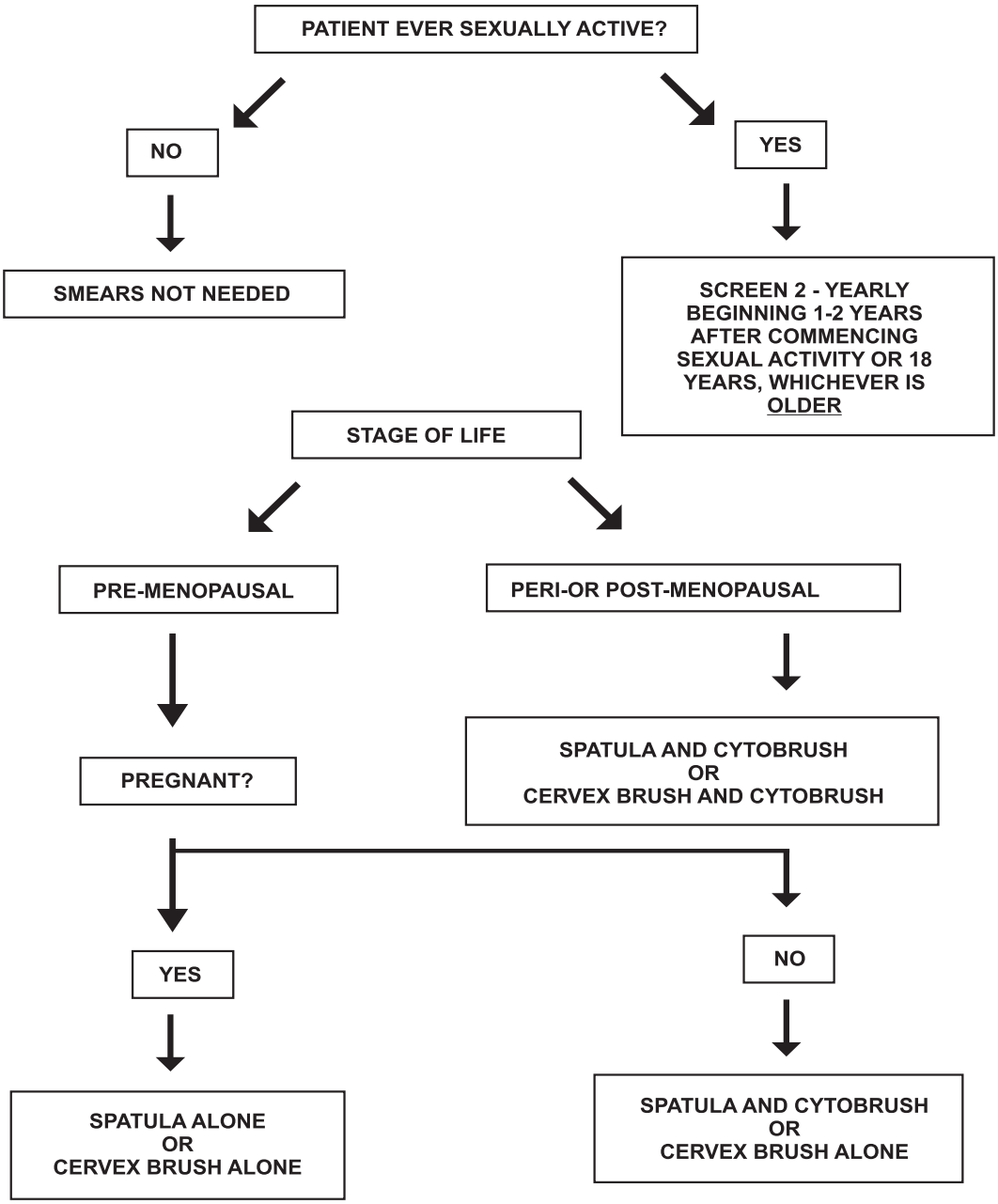
If you have a query about any aspect of the cervical screening program, please feel welcome to contact us at VCS (03 9250 0300; directorate@vcs.org.au). Dr Heley is available to answer questions concerning Pap tests or other issues to do with the Cervical Screening Program at sheley@vcs.org.au. If you would like to

arrange a practice visit for an update on Cervical screening please contact Lisa Garay (Client Services Manager) on (03) 9250 0360 or 0407 363 822 (e-mail lgaray@vcs.org.au). There is no charge for a practice visit.

NOTES

1. No cytobrush in pregnancy
2. Use plastic instruments if adding ThinPrep
3. Rotate: Spatula 1-2 turns, Cervex brush 3-5 turns, Cytobrush one quarter turn
4. Fix within 5 seconds

Pap smear flow chart



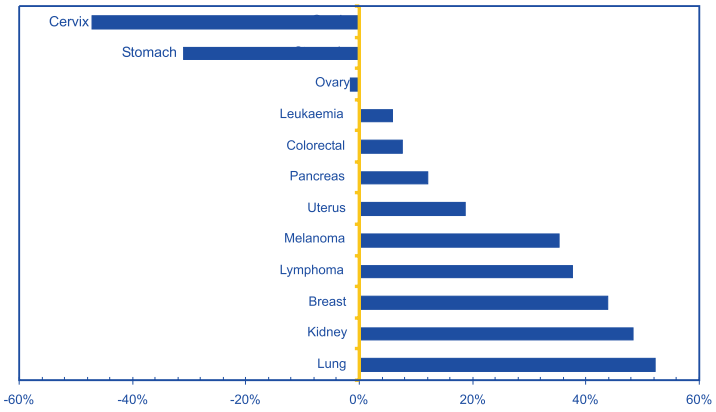
Cervical screening – a scientist's perspective

Gillian Phillips

I am a medical laboratory scientist working with the Victorian Cytology Service where we screen and report about 300,000 Pap smears each year. I am one of over forty scientists at VCS whose primary task is to examine Pap smears microscopically. The work requires considerable expertise and training, as well as skill and great patience. An experienced cytology scientist, or screener, is likely to screen about 10,000 Pap slides a year. Each slide may contain an average of 50,000 epithelial cells, all of which must be checked microscopically. That's 500 million cells to check – a somewhat daunting thought!

The cells on the smears we screen are not always easy to categorise. Sometimes they are affected by physiological factors such as inflammation or hormonal effects. At other times the cells may be affected by physical factors such as poor fixation or faulty staining. All of these factors combine to ensure that it is not always easy to decide whether or not the cells we are viewing are normal or abnormal. Even when a smear contains abnormal cells, they are frequently very small in number compared with the number of normal cells that surround them.

Table 1. **% Change 1983 - 2000 in the Rate of Incidence of most common female cancers**



Scientists involved in screening at the Victorian Cytology Service are graded according to experience and years postgraduation from technical college (RMIT). We are carefully monitored using statistical data to ensure that all work is of the highest standard. This close monitoring reassures us that the reports we issue are as accurate and reliable as is possible for a screening test.

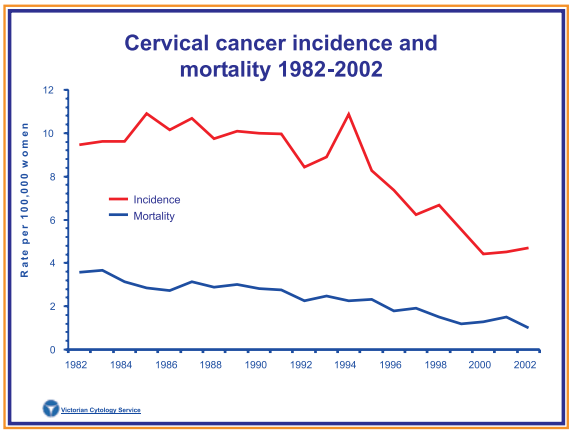


Table 2.

Australia - Incidence of most common female cancers

1983		2000	
1. Breast	5,332	1. Breast	11,314
2. Colon	3,399	2. Colon	5,542
3. Melanoma	1,971	3. Melanoma	3,761
4. Lung	1,268	4. Lung	2,782
5. Unknown 1°	1,076	5. Lymphoma	1,782
6. Cervix	**994**	6. Uterus	1,564
7. Uterus	914	7. Unknown 1°	1,558
8. Lymphoma	894	8. Ovary	1,201
9. Ovary	844	9. Leukaemia	942
10. Stomach	677	10. Kidney	935
11. Leukaemia	622	11. Pancreas	896
12. Bladder	529	12. Thyroid Gland	775
13. Pancreas	520	13. Bladder	747
14. Kidney	435	**14. Cervix**	**745**

Victorian Cytology Service

Ref: Accessed 22/9/2004 www.aihw.gov.au

Gillian Phillips *CT(IAC), CT(ASC), M.App.Sc.*

Chief scientist at VCS.

Screening is a little like proof reading page after page of manuscript. Even if one can spell perfectly, and one's knowledge of grammar is extensive, it is still possible to miss errors because, for example the handwriting is hard to decipher.

When I describe this work to others they often comment that they would find it intolerable. A medical student who visited our laboratory recently completed a questionnaire on the visit with the comment "I would hate to work there!!". So why do we do it?

Just a few weeks ago I was assembling some data for a presentation. When I looked at the tables and graphs (see graph and tables 1, 2) I was again reminded just why I find this work so rewarding. Since the introduction of organised cervical screening the incidence of cervical cancer has fallen steadily and significantly. There is virtually no doubt that Pap smears have saved thousands of Australian women from dying prematurely with cervical cancer. As a scientist screening Pap smears, I am a small but valuable part of the very large team of people whose efforts are greatly improving the health of Australian women. Everyone involved in this enterprise should feel proud of the results that have been achieved. These results have only been possible because of the cooperation of policy makers, funding bodies, practitioners, laboratory workers and many others.

This is why I choose to work in a Cervical Screening Service, although at times the work can be demanding, there is a great sense of achievement when an abnormality is detected on screening and another woman is given the opportunity of early detection and treatment to avoid dying with cervical cancer.

From Editor's Desk

Continued from pp108

MJA – Volume 181 Number 1, 5 July 2004

Eureka moments

In the distant past, Chinese Physician Chang Chung-Ching summed up the art of diagnosis – "The skilful doctor knows what is wrong by observing alone, the middling doctor by listening, and the inferior doctor by feeling the pulse."

Now, the art of diagnosis is complex and technology-dependent. Despite this, the moulding of doctors retains the tradition of delving among the symptoms and signs to deduce the diagnosis-and the moment of clinching the diagnosis still brings great personal satisfaction.

US physician David B Hellmann, in *Eurekapenia: a disease of medical residency training programs?,** laments the loss of these moments, noting: "While many types of experiences contribute to the making of a doctor, surely the episodes of discovery – eureka moments – are amongst the most important. Eueka moments add drama, fun, excitement, and meaning to being a doctor." He relates a recent experience concerning an elderly man with a 3-month history of fever, weight loss and cough for whom it took 2-3 days to learn that his sputum was positive for tuberculosis. Some 20 years earlier when an intern in the same hospital, he himself had taken the sputum of a patient with similar symptoms to the floor's staff lab and prepared Gram and Kenyon stains. He found the first was negative, but tells how, on turning to the Kenyon stain, "I felt my hair stand on end and my spine tingle as I discovered first one and then a few other 'red snappers' characteristic of tuberculosis."

The ward labs have long gone and the diagnostic work is now done before admission or after hospital discharge. We no longer hear on the wards the excited cry, "Eureka – I found it!"

And we are all the poorer.

Martin B Van Der Weyden

(Printed with permission from Professor Martin B Van Der Weyden, Editor, Medical Journal of Australia)

The Australian Pap Test Registers – how, when, where and why?

Heather Mitchell

Twenty years passed before the realisation was made that cancer screening would not achieve its potential unless it was delivered via an organised and systematic program. Today the need for structured public health programs is taken as a given, but it was not always this way.

Cervical screening became available for Australian women in the mid 1960s. Not surprisingly, the enthusiasm of health professionals, too familiar with the pain and suffering of treating people with advanced malignancy, was very evident. However, uptake by women was slow and concentrated among women in their 20s and 30s - an age group where benefits in terms of reducing cancer incidence and mortality were small.

By the mid 1980s, it was clear that cervical screening was having only a limited effect. Gynaecologists were unhappy about having to treat women with advanced cervical cancer – a disease they considered preventable. The women's health movement was becoming more assertive in demanding better services and improved outcomes. Breast cancer screening was being implemented via a formal program, and this highlighted many deficiencies in how cervical screening was being delivered. The public health movement was urging a more systematic delivery to maximise the benefit and reduce unnecessary expenditure.

The Federal Government responded to these concerns bydeciding in 1991 to reorientate existing screening into a more structured program, the National Cervical Screening Program.

The establishment of Cervical Cytology Registers (commonly referred to as the Pap Test Registers) was a key component of the new organised program.

Victoria was the first State to establish a Pap Test Register in 1989. Ultimately a register was established in each State and Territory of Australia, the Queensland register being the last to be established in 1998. While there may have been benefits from having a single national register, the regional nature of the registers has facilitated close working relationships with the local laboratories and health practitioners, as well as local ownership.

Legislative change was needed so laboratories could provide the results of women's Pap smears and cervical histology to the local Pap Test Register without obtaining the woman's signed consent. (With more than 2 million Pap smears being performed annually in Australia, signed consent was considered a logistic impossibility). Rather each register in Australia operates on an opt-off basis. In other words, each woman can object to her results being provided to the local register, but in the absence of an objection being lodged, no action can be taken against a laboratory for forwarding the results to the register.

It is the responsibility of each person who collects a Pap smear to inform women that their results will go to the local register unless an objection is lodged.

The benefits of the Pap Test Registers are many. Women can be reminded when their next Pap test is due. A safety net function can reduce the probability of a woman with an abnormal Pap smear not being told that she needs further care. Laboratories can have access to the screening history of the woman at the time of reporting a current Pap smear, potentially increasing the accuracy and relevance of their report. Quality assurance within laboratories is facilitated by the ready availability of comprehensive cervical histopathology results. Population based research and evaluation can be performed for minimal cost, thus allowing an evidence-based approach to policy formation.

The establishment of the Pap Test Registers was one of many changes associated with the introduction of the National Cervical Screening Program in 1991. Other initiatives have included the regular allocation of money for recruitment campaigns, the development of a national policy about the age range and interval for

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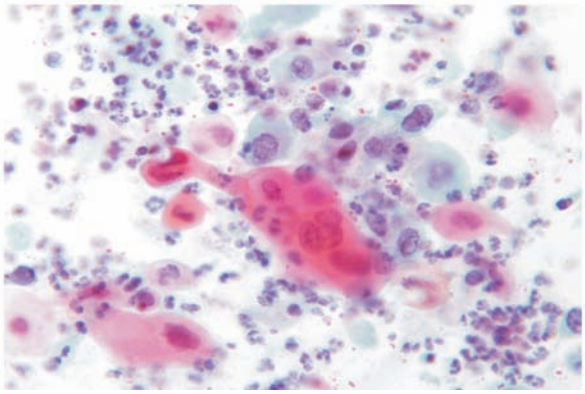
Director, Victorian Cervical Cancer Registry (VCCR).

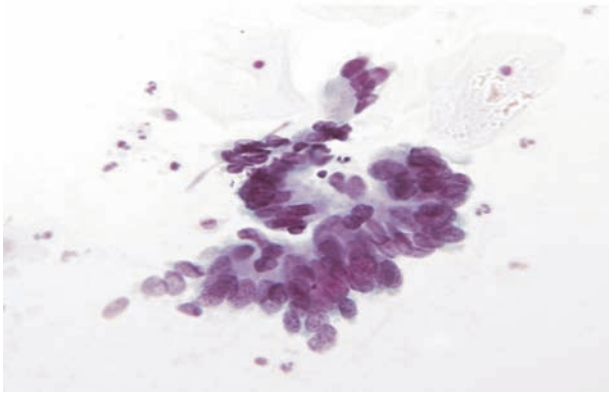
screening as well as guidelines describing how women with abnormal Pap smears should be managed, and the introduction of quantitative performance measures for laboratories reporting cervical cytology.

The results of these initiatives have been stunning. Australia is now one of the world leaders in terms of its low incidence and mortality rates for this preventable cancer. Victoria can be particularly proud, with a mortality rate equivalent to world best practice.

Squamous Cell Carcinoma

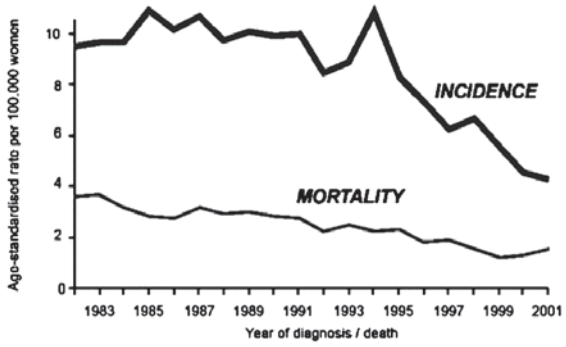


Adenocarcinoma Cx



Cervical cancer

Trends in incidence and mortality rates 1982-2001



Source: The Cancer Council Victoria Epidemiology Centre, June 2003

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1. Richter J, et al. Am J Gastroenterol 2001;96(3):656-665. 2. Castell DO, et al. Am J Gastroenterol 2002;97(3):575-583. 3. Kahrilas P, et al. Aliment Pharmacol Ther 2000;14:1249-1258.

A taboo topic for dinner conversation

Vanita Parekh

Dinner conversations can be one of those things that you remember for years to come (or not, in the case of some recent radio broadcasters). They stimulate the imagination and often give us the opportunity to explore topics that we would never otherwise discuss.

However, some social norms prevent us from discussing certain topics. For example, a recent informal survey at my clinic revealed that the 3 topics which were definitely not tolerated at our tables were talk of vomiting, bowel motions or our parent's sex lives. As I work in a sexual health centre, the tearoom chatter is comprised of talk that others not working in the field would probably not discuss. Sexual assault is not an uncommon topic of conversation.

A recent study in Australia found that 1 in 3 women and 1 in 20 men had been sexually assaulted at some point in their lives (1). How many dinner guests would you say you have had in the past 3 months? Would a discussion of sexual assault be uncomfortably 'close to home' for someone you know?

Talking about sexual assault is becoming increasingly more socially acceptable, partially as a consequence of recent media coverage. Unfortunately this seems to be limited to the context of football players. The media has not yet found a reason to highlight the fact that so many men and women have been sexually assaulted by non-footballers.

One of the reasons we don't talk about it is that it is quite confronting to realise that someone close to you is likely to have been sexually assaulted or maybe it has happened to you.

Definitions of sexual assault vary depending on the context. For example, the legal system includes the nature of the activity, the intention of the perpetrator and a lack of consent in its definition. Popular culture also has created some myths around the definition of sexual assault. These include perceptions that the perpetrator is usually unknown to the victim, that the perpetrator is usually a 'seedy character who lurks in dark alley ways', that sexual assault doesn't happen to nice people and that men don't get sexually assaulted. We know that the majority of sexual assaults are committed by perpetrators who are known to the victim, we know that men get raped, we know that rape occurs in all segments of our society. No one is immune.

Furthermore, the majority of sexual assaults happen in the victims own homes. These could be *our* homes! No wonder we don't talk about it at dinner!

In my view, any unwanted sexual activity on behalf of the victim should not be tolerated. I don't believe that there is any acceptable level of sexual behaviour without freely given consent from all parties involved.

As a doctor working in the area of sexual assault medicine, I deal with women and men who have been sexually assaulted in their lives. The assaults may be very recent or have happened some time in the past.

In cases where the assault has occurred within 7 days, evidence may still be present on the victim and be able to be collected. Evidence collection in a medical examination is a relatively small part of the medical care provided and yet it seems to consume a large proportion of the time on police and forensic television shows.

We are all aware of the use of DNA technology for identification purposes, in some way. There are numerous cases where DNA has been found to implicate perpetrators, and also to exonerate the innocent person initially found to be guilty. A person's DNA can be collected from all body fluids and even, in some cases,

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from areas where they have simply touched another person. The perpetrator can be identified from the resultant unique profile. Hence this is truly a step forward in allowing the police and courts to identify potential perpetrators. 'DNA' is the buzzword in legal cases.

The main problem with the legal system is that just because a perpetrator is found not guilty it doesn't mean they didn't commit a crime. It simply means that there just wasn't enough evidence to satisfy the high standard set by the law. However, helping obtain a legal conviction is not the sole purpose of a medical consultation following a rape case. Several other issues are considered and other assistance offered. After all, our ethical duty is to the patient first and satisfying the legal system next.

Patients' medical concerns include becoming pregnant following the assault, getting a sexually transmitted infection (STI) and getting HIV (which appears to be identified separately from STIs) (2). A well informed medical practitioner can decrease these concerns by giving people appropriate information and prophylaxis against some STIs and pregnancy.

What can *we*, as parents, sisters, brothers, friends, acquaintances, lovers, and colleagues, do about sexual assault? We can start at the dinner table.

Sexual assault is often not talked about for various reasons. Victims feel shamed by their experiences. It is a confronting topic. Blame is often attributed to the victim. The perpetrator may still be a part of the victim's environment or even a member of their family. The American study (2) showed that the biggest fear victims have is that their family and friends will find out their 'secret'. This group is precisely the one with whom we need to address the issue of sexual assault and which we should do our utmost to offer the most encouragement and support to.

If we, as a community, are willing to listen to people who tell us that they have been sexually assaulted with open ears and open minds, then we can break down some of the barriers that victims face and make a real difference to them when they need our help the most. Being a non-judgemental listener is the first step in the process of helping someone to disclose this very personal piece of information.

Once the person has vocalised their concerns, they can start to address the impact of sexual assault on their life. However, there is a danger that this information may be perceived as 'juicy gossip'. We must be very careful with this knowledge and not trivialise it or underestimate its effect on the victim's life. After all, the effects of sexual assault on victims health has repeatedly been shown to put them at higher risk of suicide, depression, drug and alcohol problems, sexually transmitted infections and unwanted pregnancy, to name but a few problems.

Talking about sexual assault out in the open could so easily prevent many of these terrible consequences and indeed reduce the incidence of sexual assault itself. By publicly acknowledging that sexual assault happens, we can begin a path of eradication through information. When you hear a victim's disclosure, telling them that you believe and support them and that they are in no way to blame is a real start.

Victims are often coerced into secrecy by the perpetrator. The way forward has to be to show the victims that it is safe to talk and to show the perpetrators that we are not uncomfortable or ashamed to discuss sexual assault. We need to let them know that we are not afraid to bring the issue out into the open. Perpetrators have long thrived on the fact that the topic of sexual assault is still kept very much 'in the dark' because our culture encourages us to simply avoid discussing it in public, at places like the dinner table. Can we afford to allow this dangerous secrecy to continue?

I'd better go now and get dinner ready. I hope you enjoy your dinner conversation over the next few months. You now have a compelling new topic to bring up when there is a break in the discussion!

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2. National Centre for Victims of Crime & Crime Victims Research and Treatment Centre. (1992). Rape in America: A Report to the Nation. Arlington, VA: National Centre for Victims of Crime.

Alternative medicine: common women's ailments

Choong Khean Foo

Women are made differently. They think differently; they do things differently; they have different likes and dislikes, they suffer from a totally different range of medical conditions - all because of the Hormones!

Women are more health conscious, more informed on Alternative Medicine which may not be entirely a good thing. With the advent of the Internet most of the women I see would have had surfed the net to find answers for their health challenges. Unfortunately, there is so much mis-information out there that women get more confused than ever before! Over 75% of patients that consult me for complementary and alternative medical treatment are women.

Recently I saw a 52 year old lady who gave me such a confusing and complicated medical story about her "illness" of migraine, chronic fatigue syndrome, chronic sinus headache, which eventually led to her getting a pension for her medical conditions. Her journey of 'diseases' for the past 35 years took her from one health practitioner to another, from one specialist to another and now from one state (NSW) to another (Victoria). She was 'pigeon holed' by so many doctors and specialists that it will be a Herculean task to 'sort her out'. Complementary and Alternative health practitioners are sought out by health conscious patients who want answers to their health challenges.

Both sexes share some common illnesses, like hypertension, diabetes, arthritis, ischaemic heart disease and cancers. In this article I will discuss the most common conditions that women patients come to consult me for:

Complementary and Alternative medical treatment: Tiredness, Stress related illnesses, Depression, Chronic Candidiasis, Functional Hypoglycaemia, Chronic Fatigue Syndrome, Rheumatoid Arthritis and Osteoarthritis, Irritable Bowel Syndrome, Pre Menstrual Symptoms, Menopause, Sexual dysfunction and Obesity.

From Health to Disease

We are born healthy and our body has a self correcting and healing mechanism to maintain good health. Why then do we get sick? The journey from health to disease (illness) just doesn't happen over night. The body tries to heal itself with whatever repair mechanism it possesses. Unfortunately illnesses will set in if our body is subjected to all the stresses and strains of modern life. So the body moves from Health to Adaptation, then to Dis-adaptation leading to Pre-disease and eventually Disease (Illness).

Definitions of these 5 stages of Health to Disease from the dictionary are:
Health is a soundness of body; freedom from disease or ailment. The general condition of the body or mind with reference to soundness and vigour; good health.
Adaptation is when the body successfully adjusts to the physical, emotional, and microbial stresses of life.
Dis-adaptation occurs when stress is excessive or when our ability to adapt is diminished.
Pre-disease is when we are not sick, but we are very susceptible to illness.
Disease is a morbid condition of the body, or of some organ or part; illness; sickness; ailment.

These 5 stages are in one continuum and not 5 distinct destinations. If we put a score on these stages, Health would score 100 points while Death would be 0 points! What the scores for Adaptation, Dis-adaptation and Pre-disease is immaterial. The idea is to keep our body in a state of optimal health. Drugs and medication at best

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General Practitioner (Retired)
Entrepreneaur

will help us to regain from a Disease stage to a Pre-disease stage. While nutrients from food sources plus a healthy lifestyle can help us to get from Pre-disease stage back to Optimal health.

In a given community, 15% of the population are vibrantly healthy. They are the vibrant young people; 10% of the population is "sick" and suffers from various named 'diseases'; while 75% of the population fall into the category of "not sick, not well" with no disease labels with which they can be tagged. Quite a number of the patients that consult a GP will fall into this category. When the doctor cannot find a diagnosis, he will usually say to the patient, "there is nothing physically wrong with you". If the doctor leaves the statement on the table, then the bewildered and frustrated patients who have the symptom, will conclude that "it must be all in my mind".

Not all symptoms presented by the patients need to have a diagnosis but some explanation can be given. When confronted with such a situation a GP should tell the patients that "I don't really know what is wrong with you and we will keep an eye on you but meanwhile you should change your diet and lifestyle etc."

The fact that a person doesn't have a 'named disease' doesn't mean that he or she is "not unwell". The journey from Health to Disease is one continuum and symptoms may appear in different forms and at different stages. An astute doctor should have an open mind and should think beyond the square.

At the end of 20th century, I did a survey of my patients and asked them to nominate what they want a 21st Century Doctor to be like. Here is a summary of the findings:

On how patients like to be treated:

The patients would like to be treated as *an Individual, a Whole Person, a Human Being* and *with Respect*

On what qualities a doctor should have:

They would like to have *an Understanding, Kind, Honest, Sympathetic, Trustworthy, Friendly and Inspiring Doctor with a good sense of Humour.*

On Communication

They would like the doctor to take time to *Listen to them attentively*, *to take time to Explain things Simply and Plainly* and help to enhance the patient's confidence to communicate with the doctor.

On Doctor's Knowledge & Attitude

Patients would like their Doctor to be *Approachable and Down To Earth with a Holistic Approach* using up to date and well informed knowledge. They would like the doctor to be open minded and be willing to learn and change.

On Diagnosis & Treatment

When making a diagnosis and formulating a treatment programme, they would like the doctor to use all natural and scientific methods and to know the limitations of Biomedicine & Alternative medicine. They would like the doctor to use the best of both worlds and work with patients through the illnesses. They want the doctor to treat the cause of the disease and not only symptomatically. They would like to discuss the choice of treatment methods and wherever possible to use natural and harm-free modalities.

****

Some Common Medical Conditions in Women Patients

(1) Tiredness/Lethargy

One of the commonest complaints women patients present with is tiredness. Most of the patients have consulted their GPs and specialists. In spite of the treatment given they still feel tired and lethargic. After excluding all known causes of tiredness, I then proceed to take a detail lifestyle and dietary history. All my new patients are put on a "Limited Elimination Diet" and nutritional supplementation. Most of them have a positive response to the programme and after 4-6 weeks they feel much better.

The foods we eat nowadays are nutrient depleted when compared with those consumed by our forefathers. This is because the fruits and vegetables are grown

with chemical fertilisers and with intensive farming methods and the produce are grown 'faster and bigger' with a reduced nutrient content. With the modern lifestyle people tend to eat 'fast foods' and foods of convenience, which are not conducive to good health. However when we revert back to what Mother Nature intends us to eat, containing all the 90 nutrients, our body will be revitalised and will be able to function efficiently and effectively.

Since the introduction of chemical fertilisers like super phosphates to the agricultural industry, even the animals have become less fertile and they have to be supported with artificial hormone injections. Similarly human beings are also becoming less fertile and assisted means of conception have to be introduced. 'Lipids & Sterols' from the husks and hulls of whole grains and legumes are raw material for the endocrine glands to produce hormones. In order to extend the shelf live of products, the outer layers of the grains and legumes are processed away. Hormonal deficiency and imbalance are playing havoc with health and well being of people of all ages.

(2) Stress & Stress related Ailments

Anxiety, depression, palpitations, panic disorders and fears. Alternative medicine can help these people by recommending proper diet and nutritional supplementation. One of the most important minerals missing in our diet is magnesium. Magnesium is a co-factor in over 300 enzymatic reactions within the cells. It is necessary for the relaxation of the muscles, it reduces nerve and muscle excitability, it stabilises cardiac conductivity and influences neurochemical transmission. It also affects the circulating levels of noradrenaline and the synthesis of serotonin and nitric oxide. Most important of all, *magnesium is a natural calcium channel blocker and therefore is very effective for the treatment of hypertension!*

B vitamins are also very important for cellular function. Vitamin B1, B6, B12 have been dubbed as 'neurotonics'. These three B vitamins are necessary for the normal function of the nervous system and they are found in the wholesome food we eat. I have helped manic depressive patients recover and get off their medication just by changing their diet and prescribing high doses of nutritional supplements. I remember very well of a lady architect who came to see me for weight management. She was under the care of 2 psychiatrists for some years and was saturated with antidepressants. After changing her diet and putting her on a nutritional programme, her condition gradually improved and she was able to reduce her medication slowly over a period of 9 months. She is now well and has been off all medication for over three years.

(3) Chronic Candidiasis

There are 80 different species of Candida and only 20 of them can cause diseases in humans the most important of which is Candida Albicans. Candida Albicans is present in or on the body of everyone. Why is it then some women will get "thrush" while others do not? Women will tell you that when their immunity is down or during certain times of the menstrual cycle, Candida Albicans will grow and manifest itself with an itchy white discharge. If proper and adequate treatment is not given, the yeast will flourish and grow in the body systems and will manifest itself in different symptoms and signs.

Most women with 'chronic recurrent thrush', seem to accept that it has become part of their lives because they cannot get rid of it in spite of many treatment by their doctors. Candida Albicans will change from a simple cell form to an activated mycelia form, which can burrow through the mucous membranes of the gut, vagina and bladder causing ulceration, fissuring and inflammation. Together with the local inflammatory symptoms, these patients may also develop other non-specific symptoms which have been described as "Candida Hypersensitivity Syndrome". They may present with symptoms like, *fatigue, lethargy, dizziness, irritability, anxiety, depression, insomnia, difficulty with concentration, headache, aches and pains in the joints, bloating and indigestion, craving for sweets and carbohydrate food, recurrent cystitis, irritable bowel syndrome, multiple allergies, food intolerance and many other symptoms.*

The total management of Chronic Candidiasis is to reduce the yeast population in the body and not only treat the vaginal thrush with creams or pessaries but also treat the whole gastrointestinal tract with oral antifungal medication. It may take 3 months to bring the yeast infection under control through proper diet and supplementation with a good lactobacillus family of organisms throughout the period of treatment and beyond. One of the mistakes made by most doctors is to treat only the vaginal tract and not treat the much longer gastrointestinal tract, which can harbour a million times more Candida Albicans.

(4) Functional Hypoglycaemia

There are three general types of Hypoglycaemia. Two of them are organic forms involving the pancreas. The third and most common form is called Functional Hypoglycaemia. This form of Hypoglycaemia is most often due to dietary factors and may be found in people with such disorders as alcoholism, juvenile delinquency, hyperactivity, drug addiction, diabetes and obesity. The severe form of Functional Hypoglycaemia may contribute to other illnesses such as epilepsy, allergies, asthma, arthritis and mental disorders.

Most of these patients have done the round of medical specialists. Quite a few have ended up under the care of psychiatrists for 'bipolar', epilepsy, depression, anxiety neurosis and other psychological symptoms. Functional Hypoglycaemia may present with subtle, episodic and multi system symptoms. So much so that many of these patients have been classified as being neurotic.

The symptoms may include a few or many of the following: *fatigue, dizziness, tiredness, irritability, mood swings, depression, weakness and aching of the muscles and limbs, numbness and tingling of the hands, feet and face, tinnitus, swelling of the legs, tightness of the chest, palpitations, anxiety and panic attacks, night sweats, constant hunger, headaches and migraines, poor concentration and memory, blurred vision, nasal congestion and abdominal cramps with symptoms of irritable bowel syndromes.*

Looking through the list of symptoms it is understandable that many doctors who are not familiar with 'Functional Hypoglycaemia' will label these patients as being "neurotic". The diagnosis is easy if we know what we are looking for, just by taking a full medical and dietary history. Some alternative health practitioners will subject the patients to a prolonged glucose tolerance test of 6 hours. In my experience it is not necessary to do this dreadful test, as with the correct treatment the patients will recover very quickly. The basis of treatment is to avoid the 'highs and lows' of blood sugar levels by making sure that the patients don't eat refined carbohydrate but to eat only complex carbohydrate, whole grains, legumes and meat. Supplements with B vitamins, chromium, amino acids supplements and high dietary fibres will help normalise the blood sugar levels.

(5) Chronic Fatigue Syndrome (CFS) & Fibromyalgia (FM)

CFS is defined as debilitating fatigue with associated symptoms lasting for at least 6 months. CFS primarily affects women in the ages 25-45. From my observation, most of my women patients are physically very active (e.g. triathletes) and they develop this condition following a stressful event or competition.

The Centre for Disease Control defines CFS as "clinically evaluated, unexplained, persistent or relapsing fatigue that is:

- § Of new or definite onset
- § Not a result of on going exertion
- § Not alleviated by rest
- § Results in a substantial reduction in previous levels of occupational, social, or personal activity."

The cause of CFS is as yet undetermined, but may be triggered by *infectious agents, stress, vitamin deficiencies, immune system dysfunction, or thyroid deficiency*. There may be a genetic predisposition to CFS. Some physicians believe the illness to be psychosomatic, but more physicians are coming around to accept that CFS is a real disease. Our personal belief aside, as doctors we should help these patients who are experiencing the debilitating symptoms of this illness.

Patients with CFS will develop a way to 'live within' their energy budget. They have discovered ways to help themselves to recover faster from tiredness. Learning how to use some or all of the modalities like Shiatsu, massage therapy, meditation, relaxation and dietary and nutritional supplementation will help them to cope better. It is important to take nutritional supplements to ensure adequate supply of all the vitamins, minerals, selected amino acids, antioxidants, coenzyme Q10, essential fatty acids, some tonic herbs, digestive enzymes to aid in the digestive functions, probiotics supplements and immune modulators like Transfer Factor.

Some experts believe CFS is closely related to Fibromyalgia. It has been revealed that for those individuals whose CFS does not improve after 5 years, the most prominent symptom changes from fatigue to muscle pain. Although there is no know cause for Fibromyalgia, its onset may be related to *physical or mental stress, inadequate sleep, injury, exposure to cold, dampness, infections, occasionally rheumatoid arthritis and immune system dysfunction*.

Fibromyalgia is a group of symptoms comprising of: *sleep disturbance, chronic fatigue and flu-like symptoms, stiffness, headache and facial pain, abdominal discomfort, irritable bladder, numbness and tingling of the extremities, chest pain, cognitive disorders, environmental sensitivity, disequilibrium and depression and anxiety*.

The Alternative medical treatment involves the use of **melatonin** to help the sleep; S-adenosylmethionine **(SAMe)** for depression and chronic pain; **L-theanine** helps relaxation; **Cetyl Myristoleate**, a medium chain fatty acid to help reduce inflammation; **malic acid** to help in the carbohydrate metabolism and formation of ATP; **B vitamins** to help lower the levels of homocysteine and increase energy levels; and **digestive enzymes** to help in the digestive function and to overcome IBS and Leaky gut syndrome. Immune modulators like **Transfer Factor** will help to bring the immune system back to normal function.

(6) Osteoarthritis & Rheumatoid Arthritis

Osteoarthritis and Rheumatoid arthritis are classified as different diseases. The management for both these conditions is to suppress the known proinflammatory factors through a combination of diet, nutritional supplements and lifestyle changes.

Osteoarthritis is mainly due to the degeneration of the articular cartilage and the synovial membrane and the bone next to the cartilage. It most often affects the weight bearing joints and the small joints of the fingers. As the condition progresses an inflammation of the synovial membrane can be seen which causes pain, swelling, deformation and reduced range of movement.

Rheumatoid Arthritis is an autoimmune disease and it strikes women three times as often as men. The aetiology and pathogenesis of RA is considered directly related to a *chronic inflammatory syndrome*. Factors that may contribute towards this chronic inflammation may include food intolerance/sensitivities, Leaky Gut Syndrome, hereditary factors and microbial infection. The primary objective of Alternative medicine management for RA and OA is to reduce the known pro-inflammatory factors [Prostoglandin E2 (PGE-2), Tumour Necrosis Factor alpha (TNF-alpha), Interleukin-1b (IL-1b), Leukotriene B4 (LTB4), and Interleukin-6 (IL-6)] using natural therapies.

I have noticed that both OA and RA respond positively to dietary changes and nutritional supplementation. There are several well-documented case reports of patients with RA who have developed an aggravation of their arthritis as a result of allergy to some ingredients in the diet. Studies have also shown that about one third of all RA patients derive benefit from dietary changes.

Glucosamine is a naturally occurring substance in the body produced by chondocytes for the purpose of producing joint cartilage. Many published papers have compared the effectiveness of glucosamine with NSAIDS - the former having far fewer side effects. In one study using electron microscopy, the articulator cartilage showed that those patients treated with glucosamine gave a picture more similar to that of a healthy cartilage. Glucosamine sulphate should be the first natural choice for OA.

Chondroitin Sulphate is a major component of cartilage. It is composed of repeated units of

glucosamine sulphate. Published papers have shown that long term treatment with chondroitin sulphate significantly reduce pain and increase joint mobility and retard the progression of disease.

Glucosamine alone or in conjunction with chondroitin sulphate is now recognised to be the treatment of choice for OA.

Nettle leaf has been shown to reduce TNF-alpha levels and IL-1b and also inhibits the genetic transcription factor that activates TNF-alpha. **Omega-3 oils** have been shown to suppress the production of PGE-2 as well as having a suppressive effect on the production of cytokines IL-1b, IL-6, TNF-alpha and LTB4. TNF-alpha plays a key role in RA and is a well known cause of oxidative stress. **Antioxidants** like vitamin C, E and selenium have been reported to diminish pain through the reduction of free radical damage to the joints. Clinically RA patients who take **Gamma-Linolenic Acid** (Evening Primrose oil, Borage oil and black currant oil) have reported a significant reduction of joint pain and swelling possibly through the reduction of the effects of autoimmune disease on the joint lining. **Methylsulfonylmethane (MSM)** has been shown to reduce arthritic pain and inflammation, increase blood flow through dilatation of the blood vessels, reducing muscle spasms and improve immune function. **Curcumin** is an anti-inflammatory that inhibits both COX-2 and LOX enzyme activity as well as interfering with NF-KB to stop autoimmune activation and lessen tissue destruction.

All my patients are put on a limited elimination diet for a period of 4-6 weeks. They are given a list of foods to avoid and a list of foods they can eat. Usually after one week their symptoms improve and they continue to improve for the next 4 weeks. Once the 'maximum' improvement has taken place, they are allowed to re-introduce foods from the 'to be avoided' list one at a time. Supplements are introduced after one week on the diet. The supplements I recommend can be one of many from this list: Antioxidants, fish oil, curcumin, gamma linolenic acid, MSM and nettle leaf.

(7) Irritable Bowel Syndrome (IBS)

IBS is a functional bowel disorder that is characterised by abdominal fullness, bloating, constipation, bowel urgency and abdominal cramps, which are relieved by defaecation, in the absence of any demonstrable causes. IBS is the most common intestinal disorder seen in general practice today. IBS is often associated with other medical conditions like chronic fatigue syndrome, fibromyalgia, chronic pelvic pain, temporo-mandibular dysfunction and some psychiatric disorders.

Diet and supplement and lifestyle changes play a pivotal role in the management of IBS. All the patients are asked to do a Complete Digestive Stool Analysis to ascertain the digestive function as well as the status of the gut flora. Many of my patients give a history of having taken prolonged courses of antibiotics for skin or chest infections in the recent past and some give a history of recurrent Candida Albican infection. From the result of the stool test one is able to formulate the treatment programme.

The patients are put on a special diet with supplements of garlic and good doses of probiotics for 4-6 weeks and are advised to avoid milk, wheat, rye, oat, barley and corn, all sugars, red meat, coffee and tea, processed and preserved food as well as additives, colourings and preservatives. Digestive enzymes and a complete food source vitamins and minerals are recommended to help hasten the process of recovery.

Table 1. Four main groups of PMS

PMS-A (Anxiety)	60-70% having symptoms
PMS-B (Bloating/Hyperhydration)	60-70% having symptoms
PMS-C (Cravings)	25-35% having symptoms
PMS-D (Depression)	25-35% having symptoms

(8) Pre-Menstrual Syndromes (PMS)

PMS has been classified into four main groups (Abraham, 1983; Ugarriza et al 1998)

See Table - 1.
PMS-A and PMS-D are caused mainly by changes in the ratio of oestrogen to Progesterone. (PMS-A the ratio is 48:1; PMS-D the ratio is 274:1; Normal 120:1)

PMS-A - the relative increase in oestrogen can be addressed by using progesterone cream as well as changing the diet and take supplements of vitamins and minerals to help offset the effects of nervous stimulation by oestrogen.

PMS-D - there is a relative increase of progesterone. Supplements with phytooestrogen from soybeans and magnesium will help to improve the ratio.

PMS-B is partly due to the hormone aldosterone causing fluid retention. Stress, magnesium and B6 deficiency and refined sugar tend to increase aldosterone hormones. Supplements with GLA, DHA, Vit E, Vitamins B6, zinc and vitamin A may be helpful for some of the symptoms.

PMS-C is due to simple carbohydrate intolerance. PMS-C sufferers should avoid sugars and take supplements of GLA, Zinc, vitamin C, B complex and B 6, fish oil and chromium.

Our poor nutrition has produced significant deficiencies of many of the vitamins and minerals needed to maintain a balanced hormonal system. Dietary and lifestyle changes and nutritional supplementation will help relieve some PMS symptoms. Nutritional supplements should include a good all round vitamins and minerals, Calcium and vitamin D, Magnesium, zinc, Vitamins B 6, GLA as found in Evening Primrose oil, natural progesterone or oestrogen cream (topical use) and vitamins C & E.

(9) Menopause

From menarche to death a women's life is controlled by the sex steroid hormone. Nothing can be as dramatic and attention seeking as then menopause. Hormonal changes during menopause can play havoc with a woman's feelings of health and well-being.

For years women were prescribed synthetic hormone replacement therapy to manage the menopausal symptoms. When the Women's Health Initiative was halted prematurely in mid 2002 due to an overwhelming increase in heart disease and cancer in patients who were taking the traditional HRT, doctors were at lost as to know what to do for their menopausal patients. Now at least patients are informed of the potential side effects of synthetic HRT, if they chose to go on it. However it is important for the doctors to inform their patients that there is another way for the management of menopausal symptoms.

Many of the western menopausal symptoms are absent in the East. It has been suggested that a high soy diet intake may play an important part in the disparity between Western and the Eastern women. Many clinical studies have shown that a high daily intake of soy phytooestrogen (isoflavones, daidzein, genistein) can rapidly reduce menopausal symptoms.

Other natural phytooestrogens

Black Cohosh Extract (Remifemin) is approved by the German Ministry of Health for the treatment of menopausal symptoms related to oestrogen deficiency. Black Cohosh extract has shown oestrogenic effect within the body but it does not elevate the oestrogen levels in the blood. Black Cohosh extract is postulated to bind to oestrogen receptors in order to mimic the hormonal effects of the weak oestrogen, oestriol.

Licorice Root Extract (Glycyrrhetic acid) stimulates the conversion of testosterone to oestrogen in the body. Numerous studies indicate that Glycyrrhetic acid is an effective oestrogen replacement therapy in human.

Dong Quai Extract has been used in China for over 300 years. It is known as a 'tonic herb for female'. Dong Quai is said to promote natural progesterone synthesis. It should be used in conjunction with other hormone-modulating plant extracts such as black Cohosh, soy phytooestrogen, Glycyrrhetic acid and others.

Vitex Agnus cactus Extract (Chaste tree berry) has been shown to suppress prolactin secretion and indirectly increase progesterone production. Excessive prolactin secretion from the pituitary gland will interfere with the beneficial effect of oestrogen.

The alternative way is to use natural hormones for modulation. Patients are first tested for their hormone levels and appropriate amounts of each of the hormones are prescribed. The troches typically contain Triest (80% Oestriol, 10% each of Oestriol and Oestrone), Progesterone, Testosterone and DHEA. The amount of each hormone is prescribed to correct the deficiencies. Regular blood tests are taken to adjust the amount of hormones for the troche. Each prescription is titrated for the need of the individual patient.

(10) Obesity

This subject concerns more than half of the women population in Australia. It seems strange that *diet and exercise regimens* will not work in the long term in obese people. The reason has to do with the basal metabolic rate and the insulin level. Weight lost by an obese person through dieting is largely protein and water. Dieting also lowers the basal metabolic rate. Exercise in overweight people will lower the need for insulin. Obese people already have too much insulin. By exercising it will cause the insulin to be more excessive.

The fact that there are numerous books written about weight loss and so many lucrative weight management centres around the country suggests that there is no one solution that will work for every obese person. Fortunately scientists have recently given us a few useful pointers as to how to induce significant and sustain fat loss.

Hyperinsulism is the culprit in the obesity epidemic today. According to some experts, one way to reduce excess insulin is to eat low-glycaemic food. However published papers give conflicting reports on the effectiveness of a low glycaemic index diet. It seems like that in order to lose weight, one must reduce or avoid the consumption of foods with a high glycaemic index as well as high glycaemic load. In order to reverse obesity, we have to overcome the multiple metabolic disorders that induce the body to store ingested calories as fat rather than to burn them as energy.

Early researchers discovered that an individual cannot mobilise fat from storage if insulin is present in the blood. Putting it another way, an obese person has elevated fasting insulin levels. Therefore, suppressing the overproduction of insulin is a crucial component of a medically supervised weight-loss programme. One way of reducing the postprandial insulin spike is to take soluble fibres (glucommanan, xanthan and alginate) before meals to retard the rapid absorption of sugars into the blood stream. **Chromium** is an essential mineral to help insulin to deliver glucose into the cells. Another supplement that has been shown to help reduce body fat and increase lean body mass is **Conjugated Linoleic Acid (CLA).**

To help weight loss one must eat a balanced low glycaemic index/load diet, do regular exercise, have a good breakfast, lunch but a medium sized meal in the evening (before 6.30 pm) and take supplements of vitamins and minerals, soluble fibres, chromium picolinate and CLA.

Concluding Remarks:

We are born healthy. Disease is foreign to our bodies. When a 'disease' sets foot in the body, the inherent immune system and healing mechanisms will go into play. In order for these systems to function efficiently our body needs all the help it can get to do the 'fighting and repair'. The body doesn't ask for much. It needs fresh air, clean water, wholesome food, rest and exercise, peaceful mind and adequate sleep. Disease is a manifestation of deficiency of some the essential 'nutrients' for health. Alternative medicine invokes the inherent natural healing systems to work properly. Alternative medicine helps to align the "Mind-Body-Spirit" axis and bring the Total Being back into balance and in Harmony with the Environment.

Health is ours to keep - if we want it.

Female Qi-deficiency Syndrome

James Khong

Sick of being tired/Tired of being sick!

There are many types of anaemia. This article deals only with dietary iron deficiency anaemia.

Introduction

My interest in Women's Anaemia began after I returned from China in 1985.1 had spent six months in Hang Zhou studying TCM and Acupuncture. In the short time I was only able to grasp the basic philosophy and theories of TCM and basic acupuncture. What impressed me most was the holistic and environmental approach to health care. It gave me a completely different insight into assessing and managing clinical problems that did not fit into the normal paradigm of Western medicine. One of the common recurrences in my practice is a large number of young women in their twenties and thirties who are chronically tired and yet when you send them for blood tests the results are usually normal. Often these women are told there is nothing wrong with them and sometimes are told it is all in their mind. When I returned from China I began looking for causes and ways of helping these women. The problem with the western approach is that we are 'treating' the pathology report not the patient so if the results are normal we then tend to 'dismiss' the patient. The Chinese approach is to 'dismiss the report' and treat the patient. After all the piece of paper does not have symptoms but the patient does. And these women are desperate for help.

Pathophysiology

Haemoglobin is the basic molecule that carries oxygen to all parts of the body. You need iron to make haem and you need proteins to provide the globin. 95% of the body's iron is bound to haemoglobin. Active haematopoiesis is reduced drastically by the age of 25 years, when the marrow becomes replaced by fat cells. Iron is absorbed in the upper half of the small intestine. Iron is poorly absorbed with only about 10 % of ingested iron being absorbed. Absorption is enhanced 10% by having Vitamin C with your meal and reduced by half if caffeine is consumed just before, during or just after a meal.1t is likely that other substances will also impair iron absorption including alcohol, nicotine and medications.

Incidence

Iron deficiency anaemia is the most common blood abnormality and probably the commonest non-infectious disorder in the world. In the third world it is due to poverty, unlike in the developed countries it is due to poor dietary habits. This is a real paradox when there is an abundance of food and an epidemic of obesity. Iron deficiency anaemia is extremely rare in young men because most men love eating red meat and don't loose blood every month. The only iron deficient men I have seen are vegetarians. Women tend to eat less red meat and loose about 60ml of blood with each menstrual period. The average woman would loose about 10 litres of blood through menstruation by the time she is 25 years old. Unless the iron intake is adequate to replace this huge loss these women will eventually be iron deficient and anaemic. The commonest age groups I see in my practice are women in their twenties and thirties. I don't see women in their 40s - presumably they would have been diagnosed by then or accept their ill health as part of their life. Women in their 50s would have stopped menstruating and may be leading less hectic lives.

Definition and Redefinition

By definition anaemia occurs when the haemoglobin falls below the lower end of the normal range. Medical

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students are still taught that iron deficiency is very rare. Some books still classify iron as a trace element. How wrong they can be - it is probably the most used element in the body. The normal range of haemoglobin is higher for males. The normal range for a female is between 115 - 165 g/l while the normal range for a male is between 130 - 180 g/l. I recently received a result of a haemoglobin for a female patient who was mistaken to be a male by the laboratory. She was diagnosed as anaemic with a haemoglobin of 125 g/1 although this value would be normal for a female. Is this difference in the normal range applicable today? Women today are as active as men, and in some cases even more active. Do they not deserve more oxygen power to supply their daily needs? It is a challenge for haematologists to reassess the whole concept of iron deficiency anaemia. Should there still be two different normal ranges for males and females? Perhaps the normal range should be moved upwards. Are we asking women to cope with haemoglobin levels set nearly 80 years ago when women lived more sedentary lives? Will your receptionist accept wages set 80 years ago? I am not waiting for academia to act. After excluding other causes of anaemia in women. I treat all women with low iron or haemoglobin as iron deficiency anemia even when the levels are within the so call normal range. I just tell them they have female Qi-deficiency syndrome.

I can't use the term anaemia because they have already been told the blood tests are all normal and that they are not anaemic.

It is also not good ethics to contradict their doctors. If we confuse our patients they will go elsewhere for answers.

Symptoms

The sufferers are young women, very active professionally or socially, some smoke, most drink and generally do not eat adequate red meats. It is very common in vegetarians.

The incidence is less when they reach menopause.

Disregard the symptoms in your textbooks as they are vague and few and probably outdated. I am still not sure what malaise, listless and lassitude mean but they still appear in textbooks. Certainly I have not heard those words used by patients. I have compiled a list of symptoms that have come directly from the women in my practice.

I have trouble getting out of bed in the morning. I have difficulty concentrating at work.

I sleep 12 hours a night and I still wake up tired.

I just don't have enough energy to do all the things I want to do. I have lost interest in sex.

I struggle to finish the days work.

When I get home I am too tired to cook a proper meal or exercise. I feel irritable.

I feel flat and depressed. My hair is falling out.

I get constipated easily.

I feel miserable.

I feel tearful without a reason.

I often get mouth ulcers or cracks in the comers of my mouth. I always feel cold even when it is warm.

I get thrush easily.

I seem to catch every virus that comes around.

I have difficulty recovering from a virus.

Sometimes I feel dizzy and my heart is racing.

My boss tells me I have taken too many sickies.

Investigations

FBE is almost not worth doing on its own however iron studies are mandatory.

I have seen many patients with a normal Hb dismissed without help and eventually found to have a low iron and ferritin. The following is typical of the results I am talking about. The patient is a 25 year old female who saw her doctor because she was chronically tired. Extensive blood tests were ordered including thyroid,

kidney, liver, diabetes and glandular fever; they were all normal. Her Hb was normal at125 g/l. When I saw her she looked tired and depressed. A full dietary history revealed she only ate meat occasionally and suffered from heavy menstrual loss .Her serum iron was 6.6 umol/l and her ferritin was 5 umol/l.

The Hb is like the expensive car people drive. The iron/ferritin levels reflect their cash flow. Iron has a wide diurnal variation and is therefore less reliable than ferritin which reflects more accurately the iron reserve.

B12 deficiency is sometimes associated with iron deficiency.

Zinc deficiency is not that uncommon, look for it in people with zero or low seafood consumption.

Exclude other conditions that share similar symptoms with appropriate tests. A good dietary history is the key.

Management

It is probably one of the easiest conditions to treat with the most rewarding results. Women when treated always say they can't believe how well they can feel.

If they don't mind eating red meat I tell them to eat it daily. They need high iron intake because they need to top up their low iron/ferritin levels; they need more for their daily requirements and then extra to replace their monthly loss.

If they refuse to eat red meats they must take iron supplements if their levels are at the lower end of normal between 9 - 15 umol/l. If their iron levels are below 9 umol/l, I encouraged them to have iron injections because you get better results quicker. When giving iron injections make sure you do it with the zigzag technique to avoid staining the skin. Some patients may need intravenous iron if their demands are excessively high. I have some patients who are marathon runners who require *IV* iron. They do not want to give up running but it is impossible to supply their iron needs orally.

Before you treat a depressed young woman with anti-depressants check her nutritional state. She will feel worse if her depression is due to iron deficiency. I come across this problem regularly and this tends to happen in quick fix clinics. One patient told me that she was given a script for Zoloft after 5 mins consultation. When a woman is chronically tired she gets depressed and tearful; that's normal human behavior. When you top their iron/ferritin levels their depression disappears quickly. If you spend more than you earn your bank account will get depressed too!

Summary

Iron deficiency anaemia is very common. Treat the patient not the pathology report.

The normal range is only a guide; women with low iron/ferritin levels within the lower end of the normal range will improve with treatment.

Iron deficiency is easy to treat and the results are immensely rewarding for the patient and for you.

Acute gastroenteritis in children

Mark Oliver

Introduction

Acute gastroenteritis is an illness of sudden onset, lasting less than 10 days, associated with fever, diarrhoea and/or vomiting, where there is no evident cause for the symptoms. This definition implies that the diagnosis is often one of exclusion. The exclusions are very important as they include some of the most serious surgical emergencies, which occur in children.

Rotavirus was discovered by Professor Ruth Bishop and colleagues at the Royal Children's Hospital, Melbourne in 1975 [1]. Subsequent to this it has been documented that this infection is the most common cause of acute gastroenteritis in children under 5 years of age in developed countries, and in 40-50% of cases where hospital admission is required. It accounts for more severe episodes in infants in developing countries than any other single pathogen; it is more likely to cause dehydration, and is associated with a higher mortality than other agent [estimated as over 600,000 per year].

Enteric adenoviruses (types 40 and 41) cause 7-17% of cases requiring admission to hospital, and several other virus candidate pathogens have been recognised, such as the Norwalk agent, calicivirus, coronavirus and other small viruses.

Bacteria cause fewer episodes than viruses in developed countries. *Campylobacter jejuni* is responsible for 5-10% of cases. *Salmonella* spp, *Shigella* spp, and various types of *Escherichia coli* each account for a small percentage. In developing countries, *E. coli* (enterotoxigenic, enteropathogenic and enteroinvasive) and *Shigella* are especially important; *E. coli* because of the huge number of episodes it causes; *Shigella* because it causes prolonged debilitating illness, and antibiotic resistant strains are emerging.

Giardia lamblia rarely causes acute dehydrating diarrhoea, but another parasite, *Cryptosporidium*, is now known to cause 1-4% of cases of acute diarrhoea in infants admitted to hospital [2].

Diagnosis and Assessment

The two most important management issues in the treatment of acute infectious diarrhoea include:

1. exclusion of other important causes of vomiting and diarrhoea
2. adequate assessment and treatment of dehydration
Differential diagnoses of vomiting and diarrhoea. These include both medical and surgical disorders such as

- appendicitis
- haemolytic uraemic syndrome
- urinary tract infection
- other sepsis (including meningitis)
- other surgical conditions including enterocolitis associated with Hirschsprung's disease and malrotation of the bowel

Presenting symptoms of acute infectious gastroenteritis include poor feeding, vomiting and fever, followed by diarrhoea. Stools are frequent and watery in consistency. The passage of blood and mucus, with frequent small volume stools and abdominal pain, is suggestive of bacterial gastroenteritis.

It is essential that all children with acute onset of vomiting, diarrhoea and fever are re-evaluated regularly so as to confirm the diagnosis of acute gastroenteritis.

Assessment of dehydration

- with young infants (<6 months) having an increased surface area: body volume ratio resulting in increased insensible fluid losses.
- recent change in body weight provides the most accurate indication of fluid depletion. Starvation produces no more than 1% body weight per day.

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- decreased skin turgor and peripheral perfusion accompanied by deep (acidotic) breathing are the best indicators of moderate to severe fluid depletion.

  <4% body weight loss represents no or mild dehydration

  4-6% body weight loss represents moderate dehydration

  > 7% body weight loss represents severe dehydration.

It should be noted that these percentages are approximate and given only as a guide.

General

- For children/infants with dehydration, a rapid hydration process over 4 to 6 hours is now suggested (as outlined in Table 2). Past regimens aimed at gradual rehydration over 24 hours were not evidence-based [3].

- Most children/infants with dehydration can be safely and adequately rehydrated using oral rehydration solutions (ORS). If this is not tolerated by the oral route, then nasogastric administration can be utilised.

- ORS is successful because it has been shown that intestinal sodium transport is enhanced by glucose transport in the small intestine and that sodium mechanism for glucose transport remains intact, even in children with severe gastroenteritis [3]. The solutions used currently in Australia are outlined in Table 3.

- Early re-feeding (after rehydration) has been shown to enhance mucosal recovery in children/infants with acute gastroenteritis, and reduces the duration of diarrhoea. Therefore continue breast-feeding or in formula fed infants, start oral intake with formula after rehydration and in children, introduce a complex carbohydrate diet [3,4].

- Transient lactase deficiency with acute gastroenteritis in infants less than 6 months is not common, so lactose free diets are rarely required after acute gastroenteritis [3].

Table 1. Guidelines to management of dehydration and nutrition

Mild 4% body weight loss decreased peripheral perfusion* thirst, alert and restless deep acidotic breathing*	• rehydrate over 6 hours with ORS/water in children/infants with mild dehydration and ORS only is preferred in the high-risk patients (infants <6 months). In infants and children in the moderate group, rehydration may require the nasogastric route. • Re-assessment including body weight and clinical examination is required at 6 hours and if fluid replete, then maintenance age appropriate fluids can be used.
Moderate 4-6% body weight loss all of the above signs (mild group) plus rapid pulse sunken eyes and fontanelle dry mucous membranes pinched skin retracts slowly (1-2 seconds)*	• introduce food intake after rehydration phase if dehydration has been corrected
Severe 7% or greater of body weight loss all of above signs (mild-moderate group) plus infants drowsy, limp, cold, sweaty, cyanotic limbs and altered conscious level chidlren apprehension, cold, sweaty, cyanotic limbs, rapid feeble pulse and low blood pressure	• if shock is present, 20mL/Kg of normal saline is given via an intravenous route (repeated fluid boluses may be required till organ perfusion is restored) • can start ORT once initial resuscitation is completed this is given over 6 hours • following rehydration the same general principles of the mild-moderate group are followed

• * these are the only signs proven to discriminate between hydration and dehydration

Table 2. Recommended hourly oral or nasogastric rehydration rate for children

Weight		Moderate Dehydration		Severe Dehydration	
Maintenance					
(kg)	(mL/h)	(4-6%) 1st 6 h	(mL/h) Next 18 h	(≥7%) 1st 6 h	(mL/h) Next 18 h
5	20	45	35	70	35
10	35	85	55	135	55
15	50	125	70	200	70
20	60	140	80	220	80
30	70	190	95	300	95
40	80	250	110	400	110
50	90	300	120	500	120

- Drug avoidance: anti-emetics and anti-diarrhoeals have no place in the treatment of infants or children with acute gastroenteritis and antibiotics have only a limited role (see later).

- Parent education is vital, especially in the outpatient management of children. The important message is the need to drink more fluid more often, which is best given in small volumes and fre quently (see Table 4). It should be emphasised that homemade solutions and ORS should be carefully prepared according to instructions provided, as it can be potentially dangerous if made up incorrectly.

Specific Recommendations

A) Admission to hospital

- infants/children who have moderate or severe dehydration

- patients at a high risk of dehydration on the basis of young age (infants <6 months) with a high frequency of diarrhoea (8 per 24 hours) and vomiting (greater than 4 per 24 hours), should be observed for 4-6 hours to ensure adequate maintenance of hydration

- High-risk infants/children (for example, ileostomy, short gut, cyanotic heart disease, chronic renal disease, metabolic and malnutrition)

Table 3. Oral rehydration preparations available for use in Australia

	Na	K	Cl	Citrate	Glucose %
Gastrolyte	60	20	60	10	1.8
Repalyte	60	20	60	10	1.8
Hydralyte	45	20	35	10	1.6

Concentration expressed as mmol/L of made up solution except glucose expressed as a percentage

Table 4. Suitable fluids for non-dehydrated children

Solution	Dilution
Sucrose (table sugar)	1 teaspoons in 200 mL boiled water
Fruit juice	1 in 6 with tap water
Cordials	1 part in 16 parts water
Lemonade	1 part in 6 parts water

DO NOT use undiluted or low calorie lemonade or fruit juice

- infants/children whose parents and carers are thought to be unable to manage the child's condition at home

- if the diagnosis is in doubt

B) Nutritional management

- breast feeding should continue through rehydration and maintenance phases of treatment [3,4]

- formula fed infants and children should re-start oral age appropriate formula or food intake after completion of rehydration [3,4]

- if there is persistent diarrhoea after re-introduction of feeds, evidence for lactose intolerance should be sought (stool pH <5 and more than 0.5% reducing substances). A lactose free formula can be used if the patient is lactose intolerant [2-4].

C) Pharmacotherapy

- infants and children should not be treated with anti-diarrhoeal agents [2-4]

- most bacterial infections do not require antibiotics [2-4]

- Salmonella gastroenteritis may require antibiotic treatment in young infants, immunocompromised patients and those who are systemically unwell [2-4]

- Shigella dysentery requires antibiotic treatment [2-4]

A special note ought to be made with regard to hyponatremic and hypernatremic dehydration as they can both result in significant neurological damage and death. Clinically we see the latter condition more frequently particularly if hyperosmolar rehydration fluid is given. If this is recognised on the grounds of history a swift referral to a Children's Hospital is imperative.

Prevention of gastroenteritis

While there can be no doubt that the prevalence of gastroenteritis worldwide generally relates to low living standards and inadequate hygiene, this does not apply in the case of rotavirus gastroenteritis which is still a major problem in developed countries. Progress towards a rotavirus vaccine was achieved using a tetravalent vaccine "Rotashield" based on simian/human reassortment viruses. This vaccine offered 80-100% protection against dehydrating disease. A licence was granted to Wyeth-Ayerst Pharmaceuticals [Philadelphia, PA] to produce it and it was recommended as part of the childhood immunisation schedule in the United States of America. Unfortunately, it became apparent that immunisation with this vaccine was associated with the development of intussusception and hence the program was ceased. Professor Graeme Barnes in conjunction with the Enteric Virus Research Group at the Royal Children's Hospital is actively working towards trials of a live attenuated [human] rotavirus strains that can be given orally to young infants. Better vaccines against typhoid, cholera and *E. coli* are also being developed [2]

Summary

In the last 30 years we have made significant progress in the understanding and treatment of intestinal infections, nevertheless these infections continue to exact an unacceptable toll on childhood well being. It is hoped that in the next decade we will be able to immunise children in both developing and developed countries against rotavirus infection and perhaps eradicate this global problem. Perhaps one of the lasting legacies of the Department of Gastroenterology at the Royal Children's Hospital may be both the discovery and elimination of this global problem.

Plastic surgery state of the art: reconstruction of the ear for microtia

Andrew Greensmith

There are many normal variants of ear size ,shape, position and prominence amongst individuals and sometimes even minor differences can attract attention and teasing by peers. One of the most severe deformities is undoubtedly anotia (complete absence of the ear) or microtia (small/hypoplastic ear). Surgical correction of microtia, if it results in a ear of near normal size, shape and position can successfully restore the self esteem of affected patients. Because of the delicate and complex three-dimensional form of the external ear, reconstruction of the absent or hypoplastic external ear is one of the greatest challenges for the plastic and reconstructive surgeon.

Incidence

Microtia is actually a surprisingly common congenital anomaly, occurring in approximately one in 6-8000 live births overall but occurring as frequently as one in 4000 live births in Japan, Korea and other Asian populations. In one large study by Melnick, et al (1) who examined auricular deformities and associated anomalies in 56,000 pregnancies amongst an ethnically diverse US population they found ear deformities (of all types) in 1.1% of births, with severe anomalies like microtia occurring in around 1 in 3000 live births. Of note the incidence is highest in the Navajo Indian population where microtia occurs in 1 in 1000 births. The right side is more commonly affected than the left by a ratio of 2:1. It is twice as common in males as females and occurs bilaterally in 10% of cases.

Microtia, while sometimes seen in isolation, is more more frequently seen as part of a generalised underdevelopment of the ipsilateral facial structures derived from the first and second branchial arches (a condition known as craniofacial or hemifacial microsomia) where associated facial hypoplasia may vary from minor soft tissue deficiency of the cheek and a small hemimandible through to facial nerve palsy, orbit malposition and hypoplasia with severe hollowing of the cheek tissues and absence of the parotid. In individuals with this syndrome up to 10% may have associated vertebral, urogenital and renal anomalies.

Aetiology

Both hereditary factors and vascular events in utero [(2)] have been suggested as factors in the aetiology of microtia although familial microtia is rare [(3)].

Other specific causative factors may be maternal rubella in the first trimester or thalidomide exposure.

Pathophysiology

Microtia is often associated with atresia or absence of the external auditory meatus, suggesting an arrest of development. The external and middle ear develop from the first (mandibular) and second (hyoid) branchial arches. The auricle starts to form at 5 weeks from 6 “hillocks” of tissue which coalesce to form the key parts of the auricle including the helical rim, tragus, ear lobule and other key parts. Interruption in proliferation and joining of the hillocks at various stages of development can result in formation of only rudimentary remnants of an ear as seen in microtia.

The most common form of microtia is the so called lobular type (figure 1) which presents as a vertical soft mass of malformed cartilage and soft tissue often with no conchal fossa or external auditory meatus.

Because the inner ear (neural portion) of the ear develops at a different stage and from different ectodermal tissue, most patients have some capacity for hearing in the affected ear at least with a bone conduc-

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tion hearing aid. If CT scans reveal the presence of an ossicular chain in the middle ear then the patient can be offered middle ear reconstruction and canal reconstruction which is generally left until after completing reconstruction of the external ear. Many patients with unilateral microtia with canal atresia but normal hearing on the unaffected side may not pursue middle ear and canal reconstruction unless they are having difficulty with directional hearing or sound location.

Treatment

The ear reaches 85% of adult size at age 4 then undergoes a small amount of growth throughout life and for practical purposes the normal ear is fully developed by age 6 or 7. Options for reconstruction include use of a prosthesis (osseointegrated implant), alloplastic reconstruction (placement of an framework of alloplastic material under the native skin remnant or local flaps), and autologous (use of the patients own tissues) reconstruction with a framework carved from costal cartilage.

Prosthetic ear reconstruction

Prosthetic ear replacements can appear very natural and with the newer osseointegrated systems they are more reliable than the older adhesive-based systems. Osseointegration involves placement of titanium anchoring posts drilled into the temporal bone. Most children are reluctant to wear such prostheses and parents of such children usually prefer the option of autogenous reconstruction with cartilage. Prostheses tend to be reserved for reconstruction after burns, tumour excision or trauma where the native skin is severely scarred and too damaged to allow draping over a cartilage framework.

Alloplastic Reconstructions

In the mid-60's silastic frameworks were developed and gained popularity initially but medium and long term results confirmed a high rate of infection and extrusion. Newer alloplasts like porous polyethylene (medpor) are promising better tissue integration but many centers are still trying to overcome problems with exposure with these products. It is also felt that these alloplastic materials are less resistant to trauma than rib cartilage.

Autogenous Reconstruction

Reconstruction with the patient's own rib cartilage remains the gold standard for ear reconstruction. The technique is not new and was first reported in the 1930's by Pierce [4] then further developed by Converse and Tanzer from the 1940's [5][6][7]. Brent further refined the techinique reducing Tanzer's 6 stage procedure to only 4 stages. Advances continue to be made in cartilage framework carving and assembly as well as handling of soft tissues. Large volume centres such as those of Firmin in Paris [8] and Nagata in Japan [9] continue to push the boundaries. The method of Firmin is my preferred method and involves two main stages. The first stage involves harvest of cartilage of ribs 6,7,8 and 9 (figures 2 and 3) through a small incision on the chest wall. The ear vestige is assessed and a template taken from the contralateral normal ear is used to determine the size of skin pocket to dissect beneath the ear vestige skin in order to accommodate the cartilage framework. If a lobule remnant is present it may be transposed posteriorly if suitable to form a normal lobule (figure 2b,2c). Vestigial deformed cartilage is removed. The framework components are carefully made from the rib cartilage, then assembled and carved into a complex three dimensional framework (figures 2 and 3) designed to mimic a normal external ear cartilage framework. This is inserted into the pocket, the skin closed over a suction drain and suction applied to contour the skin envelope down over the framework. On completion of this stage, many of the components of a normal ear are now visible (figure 3e and f) but the ear appears "stuck" to the side of the head and lacks projection. The second stage involves providing projection by cutting around the periphery of the back of the framework (3 to 6 months later) and placing a wedge of rib cartilage (stored under the scalp or at the chest donor site of the the first stage) under the framework to gain projection and form a postauricular sulcus which is then lined with a fascial flap (a temporoparietal fascia flap or occiptomastoid fascia flap) covered by a skin graft. In some patients several minor "touch up" procedures may be needed at a later date.

Conclusion

Ear reconstruction with autogenous cartilage can be an extremely gratifying procedure for the team involved in care of microtia patients. Success of outcome depends

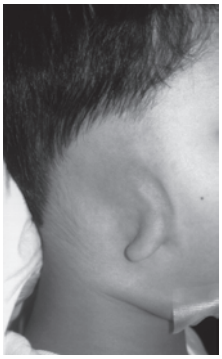


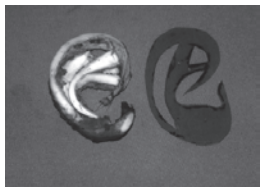
Figure 1

An example of lobular type microtia. In this case the lobule remnant is located quite anteriorly which makes reconstruction more challenging.

Figure 2

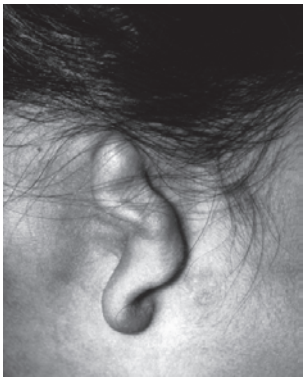
2a 6th, 7th and 8th rib cartilages alongside template of normal ear traced on a piece of sterilised exposed xray film.

2b Carving the cartilage.



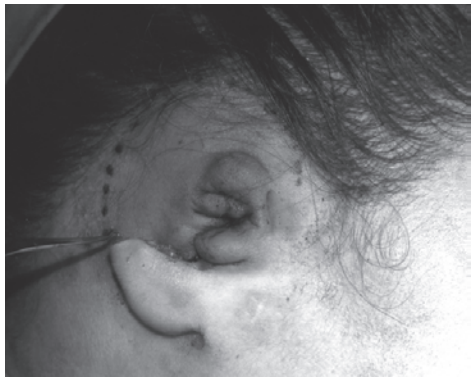
2c Assembled and carved 3 dimensional framework of cartilage alongisde template.

Figure 3

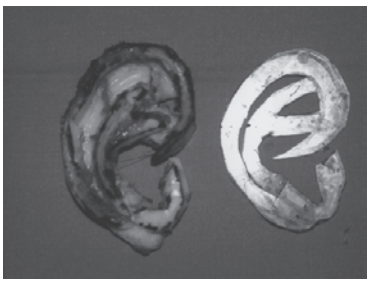


3a Patient with right lobular type microtia and absence of an ear canal

3b Lobule remnant is disected and deformed cartilage is removed then the skin pocket is made within the area marked by the dotted line.



3c The lobule is transposed into a more anatomical position.



3d Assembled and carved 3 dimentsional cartilage framework alongside template taken from normal contratlateral ear.

3e Anterior oblique view after framework has been inserted and suction applied.

3f Lateral view after framework insertion and application of suction. Many of the feature of a normal ear are now visible.

very much on preoperative planning and patients must be treated in centers providing multidisciplinary care focusing on microtia and treating a reasonable volume of patients.Advancements in total ear reconstruction have enabled a good semblance of a normal ear to be achieved in only two main operations. In the future tissue engineering and newer alloplasts may replace autogenous cartilage but currently they are far from producing similar results.

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Plastic surgery state of the art: cleft lip and palate

Andrew Greensmith

Introduction

Cleft lip and palate deformities represent a complex congenital condition and of the most common amongst the group of craniofacial anomalies. The modern management of this disorder involves a multidisciplinary approach to restore both function and form. Results that may have been acceptable thirty years ago are often no longer so and it is now possible to reconstruct the displaced complex anatomy of the lip, nose and palate to a near normal level of appearance and function.

The extent to which different methods of surgical treatment interfere with facial growth awaits further research. Only very recently has there been agreement reached in the UK on how to assess and record speech in cleft children (1). With the other many variables involved in cleft care such as techniques and timing of surgery, technical skill, hearing problems, intelligence of patients, educational and home environment and orthodontic treatment it is no wonder that there is no definitive evidence yet that one treatment protocol gives superior results over others.

Incidence and Aetiopathogenesis

Cleft lip with or without cleft palate occurs in approximately 0.75 to 1 in 1000 Causcasians, 2.1 per 1000 births in Japan, 1.7 per 1000 births in China and as high as 2 per 1000 births in South East Asia (2). Males are affected more frequently than females and clefts are more common on the left side. The frequency of isolated cleft palate is 0.4 per 1000 overall with females affected almost twice as frequently as males.

The aetiology of both cleft lip with or without cleft palate (CLP) and isolated cleft palate (CP) is thought to be multifactorial, with both genetic and environmental factors playing a role (2). In recent years some gene defects have been found in relation in to some of the less common syndromes associated with clefts (2)(3).

Teratogens implicated in clefting include alcohol, retinoids, methotrexate and cigarette smoking (2). A significant association has been discovered between any amount of maternal smoking in pregnancy and having a child with cleft lip/palate even after adjusting for confounding factors like maternal education level, race, and other medical conditions with the risk seeming to be dose related (4).

Prenatal Diagnosis and Surgery

A cleft of the lip can be detected increasingly accurately by transvaginal ultrasonograpy between 13 and 16 weeks and less so with standard ultrasound. At the present time reliable detection of cleft palate eludes us and the severity and width of the cleft are difficult to assess accurately. The issue of termination of pregnancy after early prenatal diagnosis of cleft lip raises many ethical and moral questions and the decision should ultimately be that of the parents who should be given all the support and information to allow an informed decision to be made. Parents should be informed of the high likelihood of excellent results from modern cleft surgery but also that on rare occasions other associated defects (cardiac, major craniofacial deformities, central nervous system defects) not on the initial ultrasound may co-exist.

Fetal surgery for cleft lip

It was hoped that the ability to operate on a fetus with a cleft would produce the perfect result with no visible scar based on animal studies suggesting that scars from surgical wounds made in utero appear to heal without

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(See previous article)

Figure 1 Extremely wide right unilateral cleft lip and palate (Case of Jean Claude Talmant, Nantes, France)

Fig. 1a Pre-operative appearance age 6 months at time of lip/ nose repair.

Fig lb, c Frontal and worm's eye views of late post-operative result age 17 years with excellent lip length, a fine scar and near symmetrical nostril symmetry

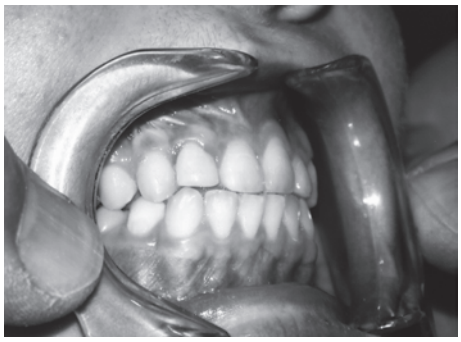

Fig.1d Occlusal view confirming near normal maxillary growth.

Figure 2 Very wide left complete cleft lip and palate case demonstrating a result after a functional repair if the lip and nose with repair of the lip and perialaar muscles and extensive correction of the nasal deformity and prolonged nasal stems. (Case of Jean Claude Talmant, Nante, France)

Fig. 2a
Pre-operative view shows how severe the nasal deformity is with extreme slumping of the left nostril, deviation of the columella and nasal septum and a very short lip.

Fig. 2b
Post-operative view 5 years post-op shows excellent facial balance, a fine scar and a near normal nasal appearance.

Figure 3 Incomplete R cleft lip and complete cleft palate. Case of Mr Andrew Greensmith.

Fig.3a Despite the fact the lip is an incomplete cleft the deformity is severe with significant lack of lip length, slumping of the R nostril rim and deviation of the columella and nasal septum.

Fig. 3b,c After functional repair of the lip and extensive nasal dissection with successful use of nostril splints for 3 months postoperatively.

Figure 4 Custom made silicon nostril splints which are ideally worn for 3- 4 months postoperatively if possible.

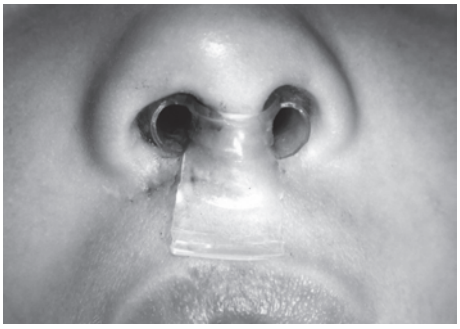

Figure 5 Bilateral cleft lip and palate

Fig. 5a In the bilateral deformity the columella is very short and both nostrils are slumped

Fig. 5b
I week after functional repair including extensive nasal correction and placement of temporary splints to mold the nostrils and lengthen the columella

Fig. 5c
The nostril retaining splints in place; attempts will be made to maintain these for 3 months post-operatively in order to achieve an early result.

trace. The initial excitement has been tempered by the inherent risk of fetal surgery to the foetus and mother for what is a non-life-threatening deformity. Indeed as we now appreciate the cleft does not mimic a simple surgical wound and that so many elements are out of position that even if the scar was invisible the remaining structures (nasal cartilages and lip/perinasal muscles) would remain displaced so that the result would likely appear as a poorly repaired cleft lip/nose with no scar. The future focus is likely to be on trying to isolate or induce the factors that cause "scarless healing" at certain stages in the foetus and use these to improve wound healing during infant cleft repairs. It is likely that foetal surgery will remain as an option only for life-threatening conditions such as diagphramatic hernia (5).

Speech and factors related to poor outcomes

Cleft patients with poor hearing will speak poorly no matter what method of palate closure they have. Glue ear is commonly associated with cleft palate and 40-70% of children with cleft palate will have this badly enough to require insertion of grommets/ventilation tubes. Closure of the cleft may reduce its incidence but there is no evidence that one operation is superior in this respect to another. It is vital to closely monitor the hearing of children with cleft palate and intervene early to prevent permanent impairment.

It is generally now accepted that very late closure of the cleft palate results in worse speech and that palate closure should be complete by 18 months of age to avoid more ingrained poor speech habits and articulation problems requiring more intensive speech therapy.

Maxillary growth and factors influencing it

This is a controversial topic and there is conflicting evidence. Some factors are unrelated to the type of surgical treatment and there is almost certainly a degree of primary tissue deficiency in the cleft region but there is no doubt though that surgery can have a detrimental impact on maxillary growth and this is supported by studies which have examined adults with unoperated clefts in developing countries and found that their growth potential was normal in most cases (6)(7). The challenge for the future is to find which method and timing protocol will have the least impact on later facial growth and careful measurements of outcome from fewer higher volume centres should give us more insight into the factors producing the best results.

Timing and methods of surgery

Most debate centers around these two issues.

Neonatal cleft repair enjoyed a period of popularity in the 1980's and early 1990's when it was argued that the scar may be better and that such early repair would relieve parents of the burden of caring for a deformed child and enhance early bonding (8)(9) yet there is now no evidence to suggest that results of surgery or bonding are better and the surgery carries higher anaesthetic risks (9) so few centers are continuing with this approach. Most surgeons wait until the child is between three and six months of age when they close either the lip/nose and soft palate (10)(11) or the lip/nose and hard palate (12)(13) or lip/nose only at 3-5 months then the entire palate at 9-12 months of age. Irrespective of the initial lip/nose/palate protocol used in most large centers worldwide the alveolar component of the cleft is left until the time of alveolar bone grafting at 9-12 years. Most surgeons aim to have the whole palate closed by 18 months of age to ensure the chance of the best speech developing. In Australasia the most common protocol is lip/nose closure at 3-6 months of age then closure of the whole palate in one procedure at 9-12 months of age. Recent work by the Great Ormond Street group suggests that if raw areas are avoided and attention is paid to accurate muscle dissection (microscope assisted) both good speech and facial growth are consistently achievable (13). It appears that one major advance in palate repair has been the introduction of the microscopic cleft palate repair where the operating microscope is used to more accurately dissect the levator palati muscles and allow surgeons to perform a more anatomical repair. Brian Sommoerlad of Great Ormond Street has popularised this method and his speech results remain unsurpassed (13). The cleft team at the Royal Children's Hospital in Melbourne is now using this method of dissection.

Cleft lip and nose repair.

Over the last century steady progress has been made in the results achievable from cleft lip repair and surgeons now more fully understand the nature of the deformity. A repaired cleft lip should look normal both at rest and during facial movement and it will only do so if attention is paid to repair the orbicularis muscles and perinasal muscles which have abnormal attachments to the surrounding bony structures.

In some children with extremely wide clefts the two halves of the maxilla are widely separated making the lip repair difficult and many surgeons will try to bring these segments of the axilla closer together in the months prior to definitive lip /nose repair by various means including special splint appliances (presurgical orthopaedics), simple adhesive strapping across the cleft or in some case a minor preliminary operation in the first weeks of life where a simple adhesion is surgically created between the sides of the lip cleft (lip adhesion). The aim of these manoeuvres is to narrow the cleft gap and take tension off the definitive repair yet surgeons remain divided about the benefits of lip adhesion and its use is subject to surgeon's preference.

One of the greatest advancements in cleft surgery has been the simultaneous correction of the coexisting nasal deformity that so greatly contributed to the residual stigmata of a "hare lip" that were so common after older methods of repair where the nose was not corrected until facial growth was complete at age 16-18 years for fear of causing impaired nasal growth. Undermining and positioning of the alar cartilages in a more symmetric and aesthetically appropriate position is now part of most modern protocols and there is ample evidence that fears of nasal growth impairment were unfounded (16). The lip and nasal results with these more functional and anatomic repairs can be outstanding even in severe clefts where there may be no remaining stigmata of a cleft which is the ultimate goal and challenge (figures 1, 2 and 3). Increasingly surgeons are using temporary nostril silicon splints (figures 4 and 5) for weeks to months after the lip/nose repair in order to further enhance the chance of an excellent nasal form by molding the patients deformed and displaced nasal cartilages and there is good evidence to support their efficacy (17).

Bilateral cleft lip and palate deformities (figure 5) tends to be a more severe deformity with more severe deformity of the nose which appears to have little or no columella. Recent trends in this area are towards a synchronous repair by columella lengthening and lip repair in addition to correction of the nasal tip cartilages and placement of silicon nasal molding stents as with the unilateral repair.

Conclusion

Clefts of the lip and palate are a common craniofacial anomaly, requiring complex multidisciplinary treatment and have significant implications for the lives of affected individuals.

Recent advances in the management of cleft lip and palate have improved the understanding of the aetiology, pathogenesis, genetic implications, and the accuracy of prenatal diagnosis. Expectations of aesthetic results are now higher thanks to advances in the correction of the cleft nasal deformity and greater attention to previously undiscovered anatomical detail, with the development of microscopic assisted cleft palate repair, has enhanced the prospect of consistently excellent speech results. Plastic surgeons continue to strive to improve outcomes in cleft deformities and will be aided with future advancements in genetic understanding, tissue engineering and 3 dimensional digital photography for long term outcome analysis . Further trends towards the centralisation of services into larger volume cleft centres participating in collaborative multicentre trials will benefit cleft patients further.

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Common ENT problems

Richard Kennedy

Otitis externa

Otitis externa is a very common condition. It involves acute or chronic infections of the skin of the external auditory canal. The most common pathogen is Pseudomonas Aeruginosa. It is more common in the summer months and is commonly called swimmer's ear. It is generally very painful and hearing may be reduced. Examination will reveal a narrowed, swollen ear canal with the drum being difficult to see. The mainstay of treatment is eardrops – Sofradex is what I use – and keeping the ear dry. If the ear canal is swollen shut an ear wick needs to be placed to facilitate the opening of the canal and the application of the drops (this is very painful). If there is surrounding cellulitis oral antibiotics (Ciprafloxacin in adults/ Flucloxacillin in children) are indicated. More severe cellulitis may require intravenous antibiotics. If pain is severe or a patient is a diabetic consideration of malignant otitis externa (more deep seated temporal bone infection) should be given as this requires extended investigations and treatment with IV antibiotics and if not treated adequately has a significant mortality.

Acute Otitis Media/Otitis Media with Effusion

Acute otitis media is a very common condition, especially in the early years of life. This involves infection of the middle ear cleft with the accumulation of fluid in the middle ear. It can cause severe pain. Often it will occur after a child has had an URTI. It is not uncommon for the tympanic membrane to rupture. Fever is commonly present but may be masked by use of Panadol and NSAID's. Common pathogens are Strep Pneumoniae H Influenza and Branhanella Catarrhalis – treatment is with oral antibiotics (Amoxycillin, Cefaclor or Bactrim) and appropriate analgesia with Panadol, Painstop or Ibuprofen. Myringotomy is rarely indicated to manage prolonged severe intractable pain. Acute otitis media may be complicated by more severe infection such as mastoiditis (which will appear as a swelling behind the ear), meningitis or brain abscess. In these cases admission to hospital is necessary for surgery and antibiotics. More commonly acute otitis media settles. On occasions the fluid may persist in the middle ear cleft leading to hearing problems and setting up for possible recurrence of the infection. It is normal for the fluid to persist for up to four weeks. If it persists for three months or recurrent infections occur, the placement of ventilation tubes or grommets is indicated. This requires general anaesthetic in a child. Presence of a middle ear effusion in an adult requires examination of the nasopharynx which will often require ENT specialist consultation.

Tympanic Membrane Perforation

Tympanic membrane perforations are relatively common. They frequently arise from acute or chronic infections. More rarely they are associated with cholesteatoma. They may also arise from trauma or be the result of previous surgery, especially previous placement of grommets. If the eardrum is perforated the ear should be kept dry to prevent infection. Moist or infected perforations should be treated with antibiotics – usually topical in the form of drops and occasionally with oral antibiotics. Failure of clearance of infection warrants ENT referral for assessment for cholesteatoma (epithelial lined cyst of the middle ear) and to assess if surgery is warranted. Small perforations usually do not cause hearing loss and any hearing loss suggests an ossicular chain or inner ear problem. Larger perforations may cause hearing loss and closure of the perforation often improves the hearing. Most perforations should be assessed by an ENT surgeon to determine if there is any danger to the ear (cholesteatoma) or if surgery is warranted.

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Nasal Obstruction

Chronic nasal obstruction is very common. It may be caused by numerous things. More episodic nasal obstruction tends to be related to inflammatory conditions such as rhinitis, sinusitis and may be related to allergy. More constant nasal obstruction suggests more anatomical deformity such as deviated nasal septum, enlarged turbinates, nasal polyps, adenoid hypertrophy or more rarely, nasal tumours. Episodic nasal obstruction will often respond to medical treatment such as nasal steroids or other allergy treatment but occasionally will require surgery to remove sinus disease or to restore nasal anatomy. Constant nasal obstruction is more likely to require surgery but often too will respond to medical treatment targeted to the cause of the problem. Symptoms of sinusitis such as facial pressure or pain and recurrent nasal discharge often require imaging (CT sinuses) to best diagnose and manage this condition. Most cases of sinusitis will settle with medical treatment with antibiotics, decongestants and nasal steroids but will occasionally require surgery to settle things down.

Emerging infectious diseases: an Australian and global perspective

(Presented at ACMAV Annual Conference)

Denis Spelman

Over the past decade a number of new infectious diseases have emerged and /or increased their geographical distribution in Australia. Some of these are unique to Australia and may reflect this country's relative isolation as well as unique ecosystems here. However infections initially occurring in other parts of the world, such as SARS, have the potential to arrive in this country with significant subsequent impact.

Australian perspective

Japanese Encephalitis (JE)

JE is caused by a flavivirus, which is transmitted by a mosquito vector with pigs and waterbirds being the usual hosts. Before 1995, the closest documented cases of JE to Australia had been 3000k away in Bali and the Philippines. Then in March-April 1995 an outbreak occurred among the residents of Badu Island in central Torres Strait. This resulted the entire population being offered JE vaccine as well as the establishment of a sentinel pig surveillence system. Further investigations established serpositive pigs on 4 islands as well as subclinical human cases. Then in 1998 a further case of JE occurred in a boy who had missed the earlier vaccination. That same year the first case of JE occurred on the Australian mainland : this was in a fisherman from the mouth of the Mitchell River in Cape York. No further cases have occurred since but this remains an ongoing threat.

Hendra virus *(initially called "Equine Morbillivirus" or EMV)*

An outbreak of this new disease occurred in a Brisbane stables in September 1995. The major manifestations were fever and respiratory symptoms. This affected 21 horses with significant mortality. More importantly there were 2 human cases and 1 death. A further human case occurred in a Mackay farmer, who initially had a self-limiting meningitis, but then re-presented with encephalitis 1 year later. A search for a reservoir of this virus among domestic and wildlife animals resulted in the finding that flying foxes or fruitbats were seropositive for this virus.

Australian Bat Lyssavirus (ABL)

Australia has been considered Rabies free, but this has now changed with the report of ABL. In 1996 a 39 year old woman was admitted to a Brisbane hospital with an encephalitis and she subsequently died. Lyssavirus antibodies were detected in the blood and CSF, with consistent histological post-mortem findings. Importantly she had cared for bats or flying foxes in the 2 to 4 weeks before the illness. Subsequently the virus, now named ABL, was identified in all 4 species of flying foxes. It is now recommended that persons bitten or scratched by flying foxes should receive rabies vaccination and rabies immunoglubulin.

Menangle Virus

An outbreak of a new disease in pregnant sows at a piggery resulted in the identification of this new virus. This had a very high death rate in newborn pigs but sows, although they developed antibody, generally remained symptom free. Also two piggery workers, both suffered influenza-like illnesses, had high titre specific antibody, and recovered. There was a large bat colony within 200metre of the piggery and samples of these had antibody to the new virus. The epidemiology of this infection is still being studied but it may be that the bats are the reservoir hosts, which then by their droppings, infect pigs with occasional accidental transmission to man.

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Barmah Forest Virus

This arbovirus or mosquito-borne virus is different from the above infections in that it has been known for some time (1st human case in 1986). However it was only in the 1990's that it emerged in many different parts of Australia: 1st recorded outbreak in the Northern Territory in 1992, clusters in Western Australia in 1992, and a large outbreak in Southern New South Wales in 1995. Its clinical manifestations are joint pain, rash and lethargy, similar to those of Ross River Virus(RRV) infection, but with a lower case attack rate than RRV.

Flinders Island Spotted Fever (FISF)

Before the 1990's, there were 3 rickettsial diseases described in Australia: Queensland Tick Typhus, Scrub Typhus and murine typhus. FISF, first described in 1991 from Flinders island in Eastern Bass Strait, is now known to be due to a new rickettsia, R.honei. The clinical manifestations are of an abrupt onset, with fever and chills, arthralgia, and rash. Some patients will give the history of a recent tick bite.

Global perspective

Autralia is not alone in the description of new infectious diseases. An example from North America is **West Nile Virus (WNV)** infection. This is a virus transmitted by mosquitoes, usually between birds, but sometimes to "dead-end"hosts such as horses and humans. This was unknown in America prior to 1999 when there was an outbreak in New York with 61 human cases. The clinical manifestations are severe encephalitis and paralysis. Over the next 4 years WNV spread to most of the United States with 9186 cases occurring in 2003. Also in 2002 WNV was found to be transfusion transmitted and in 2003 there were 23 confirmed cases. In the United States, donated blood is now screened (using Nucleic Acid Detection) for WNV. There is certainly concern that WNV will be transported to other countries via international travel of people or even horses.

A new world wide outbreak or pandemic is the ultimate fear. That this could happen is demonstrated by the influenza pandemics of the past and the recent events with SARS (Severe Acute Respiratory Syndrome) in 2003 and Avian influenza or "Birdflu" in 2004.

Prequisites for pandemic infection are (1) the emergence of a novel influenza virus for which there is no vaccine and no immunity, (2) ability of the virus to replicate in humans and cause disease, and (3) human to human transmission

SARS

The first cases probably occurred in late 2002 in the Guangdong province of China, and in February 2003 spread to Hong Kong through an unwell traveller. International guests staying at the same hotel were infected and some subsequently travelled home being the vehicle for the international spread of this virus. Many countries were affected: by the time that the World Health Organisation announced on 5th July that SARS had been contained there had been approximately 8400 cases and 800 deaths.

One of remarkable features of the SARS outbreak was the international collaborative efforts mounted in response to SARS and the efficacy of that response. The first official recognition of cases were in early March 2003, the WHO declared it to be a global epidemic in mid-March, a network of 11 international laboratories was formed and the virus was identified within weeks.

Avian Influenza (H5N1)

This outbreak among chickens was first reported in December 2003, and then from January 2004 it was reported from 7 other countries, with a very high death rate in chickens. Human cases occurred in Thailand and Vietnam.

Although "Birdflu" had occurred in the past (eg Hong Kong outbreak in 1997), the 2004 outbreak was remarkable for its unprecedented international spread and the unprecedented economic consequences. In view of the human cases there was increased fear that this may be the next influenza pandemic. However although there was interspecies transmission from birds to humans, there was no proven human to human transmission.

Concluding remarks

The reasons why new infectious diseases continue to arise are not always clear and may in fact be multifactorial. Changes to ecosystems resulting from climate change and giving rise to new vectors of infectious diseases or geographical expansion for known vectors, man's intrusion into new regions, changes in agricultural or farming methods, and increasing international travel may all have a role in the emergence of the new or the re-emergence of old infectious diseases. Such outbreaks may have a significant impact on many aspects of society: travel, tourism, economy, occupations, agriculture, the need for new vaccines(human and animal) and vector control programs.

Lessons from recent outbreaks include :

1. The importance of classical public health interventions for the control of infectious diseases. Measures such as quarantine, restriction on travel, contact tracing and isolation of infectious cases played a role in the containment of SARS.
2. The importance of hospital infection control: many of the cases of SARS occurred in healthcare workers whilst caring for infectious patients. The use of masks, gowns, gloves and handwashing were shown to be effective infection control measures.
3. The importance of international collaboration for the early detection, study and control of "global" infections such as SARS.

There is little doubt that new infectious diseases will occur. Our ability to adequately contain new threats will depend on our vigilance, the prescence of early surveillance systems and response capabilities and how well we have learnt and remembered the lessons from the past.

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Autoantibodies in clinical practice

(Presented at ACMAV Annual Conference)

Ban-Hock Toh

Autoimmune deseases are a major health problem affecting about 5% of the population in developed countries. The presence of these conditions can usually be readily revealed by a simple blood test. All that is required is a patient's blood sample from which the serum is obtained for tests for autoantibodies. These antibodies are so-called because they bind to molecules found in the patient's own circulation. The autoimmune diseases can be classifid into those that affect single organs and systemic autoimmune diseases. The organ-specific group are characterised by diseases of endocrine organs that are coupled with the presence of autoantibodies to that particular organ. Autoimmune thyroid disease and Type 1 diabetes mellitus are examples of this group in which autoantibodies to the thyroid gland and to the beta islet of Langerhans are respectively found. On the other hand, the systemic autoimmune diseases are characterised by diseases of multiple organs and are coupled with autoantibodies to very specific molecules found in the nucleus of the cell. Systemic lupus erythematosus and scleroderma are examples of this group. Finally there is a group of autoimmune diseases that do not fall into either group and that are characterised by diseases that are also restricted to a single organ but are coupled with autoantibodies that may or may not be restricted to that particular organ. These conditions include the ANCA-associated inflammatory diseases of small blood vessels, autoimmune liver diseases and autoimmune skin diseases. The table lists a range of useful laboratory autoantibody tests which may be associated with the diseases in the right hand column.

Autoantibody Tests Performed by Gribbles Pathology

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Update on cardiology 2004

(Presented at ACMAV Annual Conference)

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There have been a number of significant advances in cardiology in 2004. It is sometimes difficult to keep up to date with the progress that is made. This article does not try to encompass all the advances in 2004, but will summarizes some of the most significant advances that have been made. There are a few significant areas that will be dealt with including drug eluting stents, primary angioplasty for acute myocardial infarction and the importance of and indication for ACE Inhibitors. The final area that will be reviewed is the new anti cholesterol medication, Ezetimibe.

Drug eluting stents

Coronary angioplasty is a less invasive form of revascularization the Coronary Artery Bypass Surgery. The invention of than coronary stent in the early 1990's improved the effectiveness and safety of coronary angioplasty. Stents subsequently gained widespread use and one is now implanted in more than 90% of coronary angioplasty cases. The one major limitation of coronary stents has been instent restenosis.

Instent restenosis is secondary to neointimal hyperplasia which occurs in 15-25% of cases. The most recent innovation has been the drug eluting stent. This became available in Australia in late 2003.

Sometimes referred to as a "coated" or "medicated" stent, a drug-eluting stent is a normal metal stent that has been coated with a pharmacologic agent (drug) that is known to interfere with the process of restenosis. Restenosis has a number of causes; it is a very complex process and the solution to its prevention is equally complex. However, in the data gathered so far, the drug-eluting stent has been extremely successful in reducing restenosis from the 15-25% range to single digits. There are three major components to a drug-eluting stent:

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- Type of stent that carries the drug coating
- Method by which the drug is delivered (eluted) by the coating to the arterial wall (polymeric or other)
- The drug itself – how does it act in the body to prevent restenosis?

The two stents available in Australia are the Cypher stent (Cordis, Johnson & Johnson) and the Taxus stent (Boston Scientific). The Sirolimus-coated Bx velocity stent in the treatment of patients with de novo artery lesions (SIRIUS) trial was the first large U.S. experience with the Cypher (Johnson & Johnson) stent, and this trial was quickly followed by the large European experience.

Sirolimus is a macrolide antibiotic with potent antifungal, immunosuppressive, and antimitotic properties. The drug is produced by cultured *Streptomyces hyroscopicus*. Rapamune (Wyeth-Ayerst Laboratories) was approved by the US Food and Drug Administration for the prophylaxis of renal transplant rejection in 1999. Shortly after this approval, the first sirolimus-eluting stents were implanted in human coronary arteries.

The RAndomized study with the sirolimus-eluting Bx VELocity balloon-expandable stent (RAVEL) (1) was the first randomized trial to compare slow-release sirolimus-eluting stents with bare BX Velocity stents (Cordis, a Johnson & Johnson Company) for revascularization of single, de novo lesions in native coronary arteries. In-stent late loss was significantly lower in the sirolimus stent group (<0.01 mm) than in the standard stent group (0.80 mm, $P<0.001$). None of the patients in the sirolimus-stent group had restenosis, and the incidence of major adverse cardiac

events was 5.8% in the sirolimus-stent group after 1 year. Notably, no episodes of stent thrombosis occurred. *This study uniquely reported zero percent restenosis after coronary stenting*.

The Taxus stent has Paclitaxel (Taxol; Bristol-Myers Squibb). Paclitaxel is a microtubulestabilizing agent with potent antitumor activity. A series of clinical trials (TAXUS I through IV) have been designed to test the feasibility and effectiveness of polymer based paclitaxel-eluting stents in a variety of clinical settings. (2) The TAXUS I-IV studies have produced similar results to the RAVEL study.

Drug eluting stents have produced improved outcomes for patients. There is now a very low restenosis rate after coronary angioplasty and stenting. The increased safety of coronary angioplasty with and the advent of stents and now the very low restenosis rate with drug eluting stents have revolutionised coronary revascularisation.

Primary Angioplasty for Acute Myocardial Infarction

The reperfusion wars of the last decade seem a distant memory. Although thrombolysis has produced significant improvements in the management of patients with acute myocardial infarction, Primary angioplasty is being increasing recognised as the preferred modality of reperfusion if available.

Numerous trials, including a recent overview of 23 randomized trials, clearly support the superiority of catheter-based reperfusion over fibrinolytic therapy for the treatment of STEMI. A recent analysis of the National Registry of Myocardial Infarction trials has also demonstrated a mortality benefit with primary percutaneous coronary intervention (PCI) in STEMI patients who have contraindications to thrombolytic therapy. Accordingly, the focus of clinical research in AMI has been directed toward several key issues: 1) how to improve the availability of mechanical reperfusion in the community; 2) what is the optimal preprocedural therapy before primary PCI; and 3) what adjunctive therapies can be applied to enhance myocardial salvage.

Two landmark studies published last year stole the spotlight: the DANish trial in Acute Myocardial Infarction (DANAMI-2) (3) and PRimary Angioplasty in acute myocardial infarction patients from General community hospitals transported to percutaneous transluminal coronary angioplasty Units versus Emergency thrombolysis (PRAGUE-2) (4). The results of these trials have already had an important impact on clinical practice patterns around the world. Both studies were designed to evaluate the optimal reperfusion strategy for patients presenting to hospitals without invasive facilities.

Patients were treated either on-site with fibrinolysis (tissue-type plasminogen activator [t-PA] in DANAMI-2 and streptokinase in PRAGUE-2) or transferred to an invasive center for emergency cardiac catheterization and coronary intervention, when indicated. In both trials, there was a dramatic reduction in the incidence of major adverse cardiac events (MACE) at 30 days in the invasive groups; in fact, the DANAMI-2 trial was halted early by the Data Safety and Monitoring Board because of the marked improvement in outcome in patients treated with mechanical reperfusion. Therefore, these data validate the hypothesis that transfer for catheter-based reperfusion is superior to on-site fibrinolytic therapy, despite the additional time to treatment incurred during patient transfer. This benefit is partly explained by the fact that stenting, unlike thrombolysis, results in greater myocardial salvage, independent of the time to treatment. Additionally, primary PCI significantly reduces the risk of early re-infarction, which is associated with increased mortality after fibrinolytic therapy.

A recent meta-analysis of six randomized trials, patient transfer for PCI was associated with a 42% reduction in the composite end point (death/re-infarction/stroke), compared with a strategy of on-site thrombolysis. This was driven mainly by a reduction in the incidence of re-infarction (68% reduction) and stroke (56% reduction), but there was also a trend toward improved survival with PCI. Overall, these findings strongly support communitywide adoption of a transfer strategy for mechanical reperfusion.

These studies showed an improved outcome for patients treated with primary angioplasty versus thrombolysis.

The challenge now is to overcome logistical obstacles and replicate these impressive results in routine clinical practice.

Ezetimibe

Ezetimibe is a cholesterol absorption inhibitor, the first in a new class of lipid-lowering compounds that selectively inhibit the intestinal absorption of cholesterol and related plant sterols. Ezetimibe is orally active, and has a mechanism of action that differs from other classes of cholesterol-reducing compounds (e.g., statins, bile acid sequestrants [resins], fibric acid derivatives, and plant stanols). Ezetimibe selectively inhibits cholesterol absorption in the intestine, while statins inhibit cholesterol synthesis in the liver. Ezetimibe selectively inhibits cholesterol absorption in the intestine, while statins inhibit cholesterol synthesis in the liver. Dietary and biliary cholesterol in the lumen of the small intestine is packaged into micelles that diffuse across a thin mucus layer to the surface of the intestinal epithelial cells (enterocytes). Upon reaching the enterocyte, cholesterol is released from the micelle.[3] The cholesterol then passes through the mucosal membrane of the enterocyte by a mechanism that is thought to be mediated by a transporter within the brush border.Soon after administration, the majority of ezetimibe and the active metabolite localizes in the enterocyte brush border, with the remainder passing through the portal circulation and returned to the intestines via the bile. The localization of ezetimibe in the brush border is thought to inhibit the cholesterol transport mechanism, thus preventing biliary and dietary cholesterol from entering the bloodstream. Consequently, less cholesterol is delivered to the liver, which causes a reduction of hepatic cholesterol stores and increases clearance of cholesterol from the blood. Additionally, ezetimibe does not affect the absorption of fat-soluble vitamins.

Ballantyne et al compared the efficacy and safety of co-administered ezetimibe + simvastatin with atorvastatin monotherapy in adults with hypercholesterolemia. (5) Seven hundred eighty-eight patients were randomized 1:1:1 to 3 treatment groups; each group was force-titrated over four 6-week treatment periods: (1) 10 mg of atorvastatin as the initial dose was titrated to 20, 40, and 80 mg; (2) co-administration of 10 mg of ezetimibe and 10 mg of simvastatin (10/10 mg) was titrated to 10/20, 10/40, and 10/80 mg of ezetimibe + simvastatin; and (3) co-administration of 10/20 mg of ezetimibe + simvastatin was titrated to 10/40 mg (for 2 treatment periods) and 10/80 mg of ezetimibe + simvastatin. Key efficacy measures included percent changes in low-density lipoprotein cholesterol (LDL) and high-density lipoprotein cholesterol (HDL) from baseline to the ends of (1) treatment periods 1 and 2 (for LDL cholesterol) comparing co-administration of 10/20 mg and 10/10 mg of ezetimibe + simvastatin with 10 mg of atorvastatin and (2) treatment period 4 (for LDL cholesterol and HDL cholesterol) comparing co-administration of 10/80 mg of ezetimibe + simvastatin with 80 mg of atorvastatin. Baseline LDL and HDL cholesterol levels were comparable between treatment groups. At the end of treatment period 1, the mean decrease of LDL cholesterol was significantly ($p </= 0.001$) greater for co-administration of 10/10 mg and 10/20 mg of ezetimibe + simvastatin than for 10 mg of atorvastatin. At the end of treatment period 4 and after comparing maximum doses, co-administration of 10/80 mg of ezetimibe + simvastatin was superior to 80 mg of atorvastatin in the percent LDL cholesterol decrease (-59.4% vs -52.5%, $p < 0.001$) and HDL cholesterol increase (12.3% vs 6.5%; $p < 0.001$). All treatments were well tolerated. Thus, a greater LDL cholesterol decrease and HDL cholesterol increase were attained by treating patients with co-administration of ezetimibe and simvastatin than with atorvastatin.

Studies have been performed with Ezetimibe and simvastatin, atorvastatin and pravastatin. All have shown another 20% improvement in LDL and total cholesterol by adding Ezetimibe to statin therapy alone.

Euorpa

Angiotensin-converting-enzyme inhibitors (ACEIs) have been shown to have the broadest impact of any drug in cardiovascular medicine, reducing the risk of death, myocardial infarction, stroke, diabetes, and renal

impairment. They benefit patients with heart failure or left ventricular dysfunction post-myocardial infarction, peripheral vascular disease, diabetes, stroke, or transient ischaemic attack. In *The Lancet (*Vol 362, September 6, 2003), investigators from the European Trial on Reduction of Cardiac Events with Perindopril in Stable Coronary Artery Disease (EUROPA) show that ACEIs also benefit patients with coronary artery disease.

EUROPA (6) randomised 12 218 patients aged 18 years or older to receive either perindopril (a long acting ACEI with a terminal half-life of 25–30 h) or placebo. 65% had previous myocardial infarction, 50% had coronary artery disease on angiography, and 23% were men with a positive stress test. Perindopril reduced the combined frequency of cardiovascular death, myocardial infarction, and cardiac arrest within 4·2 years by 20% (from 603 patients [9·9%] to 488 patients [8·0%], p=0·0003). There was a nonsignificant 14% reduction in cardiovascular mortality and a significant 22% reduction in non-fatal myocardial infarction (p=0·001). Cardiac arrest occurred in only 26 patients. The overall findings were consistent in most subgroups including men, women, elderly patients, diabetic patients, and patients with or without hypertension. These benefits were achieved on a background of high usage of aspirin, B blockers, and lipid-lowering drugs.

Perindopril was well tolerated in EUROPA. Overall, treatment adherence was maintained for 3·7 years of the 4·2 year follow-up (88%); thus the effect of perindopril could have been underestimated by almost 50% (ie, a 29% relative reduction rather than the 19% figure reported). If higher compliance rates were achieved, one cardiovascular death or myocardial infarction might be prevented for every 36 patients treated for 4 years.

The EUROPA and HOPE findings with high-dose perindopril and ramipril (both long-acting ACEIs with high penetration into tissue) may not be applicable across the range of available ACEIs with varying properties administered in different doses, and the results of further trials with other agents are awaited, such as the Prevention

of Events with ACE Inhibitors (PEACE) study of trandolapril. However, these studies have provided strong evidence that, regardless of left ventricular function, all patients with coronary artery disease (and without contraindications against ACEIs) should now be treated with an ACEI in addition to aspirin, a beta blocker, a statin, and aggressive risk-factor modification.

This article only outlines some of the important advances in cardiology during the last 12 months. It cannot hope to be fully comprehensive, but I hope that I have provided a good overview of the main advances.

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Stem cell therapy for repair of the heart

Andrew Boyle

Introduction

Myocardial ischaemia remains the leading cause of heart failure, which affects nearly an estimated 300,000 Australians, with approximately 30,000 new cases diagnosed each year. [1] The socioeconomic burden of heart failure is projected to increase. Current treatment, which includes angiotensin converting enzyme (ACE) inhibitors and beta-blockers, only partially reduces the high mortality, which is similar five years after presentation to that of many malignancies. [2] Recently, there has been much enthusiasm about stem cell therapy amongst scientists, clinicians and the general public, because of expectations that it can reduce left ventricular (LV) impairment following myocardial infarction (MI), and perhaps even reverse pre-existing myocardial damage. Whether it will live up to its potential remains to be seen. Early pre-clinical animal studies suggest that stem cell therapy may indeed deliver on these early promises, but there remain many unanswered questions and potential difficulties before this becomes standard treatment in humans.

Stem cells

Stem cells are defined by their ability to self-renew and to form one or more differentiated cell types. [3] Stem cells have been shown to reduce cardiac damage from myocardial infarction and improve LV function in animal studies. The types of stem cells under investigation for cardiac repair include embryonic stem cells, adult skeletal myoblasts, adult bone marrow derived endothelial progenitor cells and mesenchymal stem cells.

Human trials are showing promising results in myocardial regeneration, but debate exists as to the most effective cell type, the number of cells needed to achieve a beneficial result, the most effective delivery mechanism of these cells to the area of myocardial damage and the optimal timing of stem cell delivery.

Adult bone marrow mononuclear cells

It has long been known that adult bone marrow contains stem cells capable of replenishing circulating blood cells (red cells, white cells and platelets) in times of need. It is increasingly recognised that bone marrow also contains a repair mechanism for damage in other tissues, in particular the heart. [4] This repair mechanism, however, is unable to repair large amounts of tissue damage, such as myocardial infarction. Bone marrow mononuclear cells (BMMNCs) from adult bone marrow, when injected into the heart following myocardial infarction in animal studies, resulted in improvement in LV function. Clinical trials rapidly followed, and these have shown safety of intracoronary, [5,6] direct intramyocardial injection [7] and cardiac catheter-based intramyocardial injection. [8,9] Recently, the first randomised controlled trial of BMMNC therapy for post MI therapy was published. [10] Following MI treated with coronary artery stenting, patients were randomised to receive intracoronary BMMNCs or standard care. 30 patients were randomised into each arm and the stem cell group showed an improvement in left ventricular ejection fraction (LVEF) of 6.7% over the 6-month follow-up period, whereas control group improved only 0.7% with standard treatments ($p=0.0026$). Although this is only one relatively small study, combined with multiple phase 1 non-randomised studies, there is an accumulating body of evidence that stem cell therapy can improve LV function following MI.

Adult bone marrow derived mesenchymal stem cells

Mesenchymal cells have been shown in vitro to differentiate into multiple tissue lineages, including muscle,

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fat, bone, teeth and now cardiac muscle. Animal studies shave shown significant improvements in cardiac function following intramyocardial injection of mesenchymal cells. To date, however, no human trials have injected purified mesenchymal stem cell for myocardial repair. Most studies have instead focused on injection of BMMNCs, which contain the mesenchymal and endothelial progenitor populations, rather than the purified mesenchymal cells alone.

Adult bone marrow derived endothelial progenitor cells

Within adult bone marrow are a population of cells with the phenotypic and functional characteristics of embryonic angioblasts. These cells are capable of growing new blood vessels in the peri-infarct zone following MI, reducing the apoptotic death of cardiomyocytes in this area and improving LV function in animal studies. [11] These cells are found within the CD34+ fraction of marrow, and simply selecting for CD34+ cells and injecting these can produce the same effect. [11] As well as growing new vessels, whereas other cell types focus on growth of new cardiac muscle, another advantage of this cell type is that they can be expanded and mobilised from marrow into the peripheral circulation using granulocyte colony stimulating factor (GCSF). This allows access to the cells from venous blood rather than bone marrow biopsy, and many times more cells to be harvested this way than can by bone marrow biopsy. We recently completed a phase one study of patients with severe coronary artery disease who were unable to have coronary stenting or bypass surgery and had ongoing ischaemia despite maximal medical treatment. We mobilised CD34+ cells with GCSF and injected them via the coronary artery using standard angiography techniques. This treatment was safe and follow-up angiography showed new collateral vessel growth which paralleled the symptomatic improvement seen by the patients, however conclusive proof of efficacy cannot be drawn from a phase 1 study and larger randomised trials are needed.

Embryonic stem cells

Derived from the inner cell mass at the blastocyst stage, embryonic stem (ES) cells provide totipotent cells i.e. cells that have the potential to differentiate into all tissue types. Multiple studies have demonstrated the ability of these ES cells, both from human and animal origin, to differentiate into cardiac myocytes in vitro. Using cell surface markers specific for cardiac myocytes and morphological analysis, these cells become cardiomyocytes and spontaneously contract in vitro. They have been shown to connect via the appropriate gap junction with other cardiac myocytes in vitro. ES cells derived from mice [12] have been shown to repair the cardiac damage from an MI in a rat model, repairing the heart attack damage and improving LV function. This demonstrates that the cardiomyocytes derived from mouse ES cells are functionally competent. To date, human ES cells have not been used as therapy to repair cardiac damage, and considerable debate continues into the ethical issues surrounding human ES cell therapies. Whether human ES cell therapy is considered ethical or not, the in vitro study of ES cells provides a valuable insight into the differentiation pathways of cardiac myocytes, and may help guide the application of adult stem cell therapy.

Skeletal myoblasts

Skeletal myoblasts, also known as satellite cells, are the stem cells residing in skeletal muscle that can repair damaged muscle fibres when needed. Recent preclinical and phase 1 clinical studies have investigated whether these cells can also repair cardiac muscle following ischaemic damage. [13,14] Both these clinical phase one studies suggested that there may be some improvement in LV function gained from autologous skeletal myoblast transplantation in MI scars, but conclusive proof of efficacy cannot be drawn from a phase 1 study. They also demonstrated a 20-40% incidence of sustained ventricular tachycardia (VT) following skeletal myoblast transplantation into the infarcted region of the LV. Implantation of cardiac defibrillator prevented any arrhythmic deaths in one study [13] and prophylactic amiodarone infusion prior to cell transplantation prevented recurrence of VT in another [14]. Therefore, although there may be some improvement in LV function gained form this approach, there are issues

Injection of CD34+ stem cells via the coronary artery in the cardiac catheterisation lab, St Vincent's Hospital Melbourne.

regarding promotion of arrhythmia from injection of this cell type. Another issue with skeletal myoblast therapy is that the cells require culture in the laboratory for several weeks to achieve the numbers needed for efficacy, raising the cost of the procedure and the possibility of contamination or infection. The ongoing larger studies with this cell type will answer these questions.

Issues for cardiac stem cell therapy

Several issues exist for stem cell therapy before it can become a mainstream treatment for MI and heart failure. Firstly, which is the best cell type? Is it mesenchymal stem cells for heart failure, endothelial progenitors for ischaemic heart disease and angina? Is it a combination, such as BMMNC's? If BMMNCs work, which cell types are working, and does it really matter if LV function is improved?

Secondly, how many cells are needed? Animal studies show that effect is clearly dependent on the number of cells injected. Thus far, clinical studies are injecting however many cells they can access, rather than controlling for the number of cells injected. Careful controlled studies comparing cell populations in comparable numbers are needed.

Thirdly, what is the most appropriate way of delivering the cells? Intramyocardial injection may be superior to intracoronary or intravenous delivery when delivering cells that do not traffic to sites of tissue damage, such as mesenchymal cells, or in clinical applications where there has been no recent tissue damage. However because some cells, such as endothelial progenitor cells, traffic to areas of tissue damage, they may not need to be injected locally, and may be adequately delivered intravenously or via the coronary arteries.

Conclusion

The exciting new area of stem cell therapy for cardiac repair has shown promising early results in clinical trials, but, as with any new therapeutic modality, there are still many questions to be answered. Larger randomised controlled trials of stem cell therapy are required to confirm efficacy before this becomes standard treatment.

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Refernces continued pp85

Distinction of Endocervical and Endometrial adenocarcinomas: immunohistochemical p16 expression correlated with human papillomavirus (HPV) DNA detection.

Ansari-Lari MA, Staebler A, Zaino RJ, Shah KV, Ronnett BM.
Am J Surg Pathol. 2004 Feb;28(2):160-7.

The morphological similarity between endocervical carcinoma of "endometrioid type" and adenocarcinomas of genuine endometrial origin can cause difficulty in differentiating the two, particularly in biopsy and curettage specimens. This team from the Department of Pathology at the Johns Hopkins University School of Medicine in Baltimore USA, have used immunohistochemical staining for p16, an inhibitor of cyclin-dependent kinases, in a series of hysterectomy specimens.

Overexpression of p16 has been observed in cervical dysplasias and malignancies associated with high-risk strains of the human papilloma virus. Adenocarcinomas of endometrial origin do not share this close association with HPV and although in situ hybridisation testing for HPV DNA could also be used to differentiate the two, this study demonstrates that p16 immunochemistry is both easier to perform and more sensitive in distinguishing the two tumours.

The p16 expression in carcinomas of endocervical origin was strong and diffuse in the vast majority of cases, whereas in adenocarcinomas of endometrial origin the expression of p16 was weaker and had a more patchy distribution. The authors do acknowledge that some endometrial serous carcinomas do show a similar p16 staining pattern to endocervical carcinomas. However the majority of these serous carcinomas typically are sufficiently different in terms of cytological and architectural features to differentiate them from endometrioid endometrial and endocervical carcinomas on simple histology alone.

The article closes with a statement that the team is continuing its evaluation of the usefulness of the p16 immunohistochemical marker by using it in routine use of p16 immunhistochemistry in these specimens may become commonplace.

Joanna Ding

Gambling with your life: The process of breast cancer treatment decision making in Chinese women.

Lam WW, Fielding R, Chan M, Chow I, Or A;
Psychooncology. 2005 Jan;14(1):1-5

22 Hong Kong women with breast cancer were studied post-surgical treatment as to whether the emotional response to breast cancer diagnosis and other factors influenced treatment decision. Fear of death and uncertainty of surgical outcome were shown to often influence decision making during treatment. Lack of guidance from surgeons appeared to impair decision making. Patients expressed doubt as to whether the right decision had been made, implying that these women were emotionally vulnerable while awaiting the results of pathology following surgery. Emotional support before and after surgery and more in depth discussion of treatment options would appear to be required.

The long-term impact of medical and socio-demographic factors on the quality of life of breast cancer survivors among Chinese women.

Cui Y, Shu XO, Gao Y, Cai H, Wen W, Ruan ZX, Jin F, Zheng W;
Breast Cancer Res Treat. 2004 Sept;87(2):135-47

1065 Women in Shanghai were surveyed for ifeage of the group was 48.1 years with a median survival period of 4.3 years. Age at diagnosis, stage of disease and type of surgery were associated with social and/or physical well-being. There was no association with QOL in type of therapy (chemotherapy versus radiotherapy options). Recurrence of disease, time since diagnosis, marital status, income and education all had significant and independent association with QOL.

Joanna Ding
Siew-Khin Tang

VATS, HATS & HALO: More acronyms, less invasion

(Presented at ACMAV Annual Conference)

Gavin M Wright

Introduction

Minimally invasive surgery of thoracic organs has under-gone rapid advances in the last decade. The scope and complexity of surgery is constantly increasing. This paper will explore the history of these advances, up to and including the latest techniques being pioneered at St Vincent's Hospital, Melbourne. The associated plethora of acronyms will also be demystified.

The chest is a difficult cavity to access due to its protection by the sternum, ribs and vertebral column radially, and the neck and diaphragm superiorly and inferiorly. Thoracotomy has been the mainstay of surgical access to the chest for the last century. This is a large muscle cutting incision of the posterolateral chest wall. The ribs are retracted using a large metal self-retaining retractor, resulting in rupture of costovertebral ligaments, rib fracture and intercostal neuropraxia. Consequently, post-operative pain, restricted mobility and reduced quality of life are the costs of intervention in this body cavity. This paper explores the development of minimally invasive alternatives to thoracotomy that have allowed surgeons to break into chests without breaking ribs.

History of Thoracoscopy

The first surgeons to use a telescope to inspect the thoracic cavity were in fact urologists. In 1867, Sir Francis Cruise peered into the chest of an 11-year-old girl with an empyema. He used a candle-powered rigid cystoscope to place a drain tube. In 1910, the German urologist, Jacobeus, also used a rigid cystoscope to perform thoracoscopy and "therapeutic pneumothorax" for tuberculosis. He was thereafter considered the father of thoracoscopy, a technique used for almost a century to perform pleural biopsies and place drains.

Since the advent of laparoscopic surgery in the late 1980's, similar technology has been applied to thoracic surgery. This transformed the limited direct-viewing thoracoscopy of old into a method of performing definitive surgery without the need to perform a large thoracotomy. Video-assisted thoracic surgery, or VATS, was born.

In the early 1990's the advantage of using VATS to perform pleurodesis for spontaneous pneumothoraces and malignant effusions was quickly realised, and this became the standard operation. Revolutionary as this period was, it was only a small taste of what was to come.

VATS

Advances in video and stapler technology have led to VATS being used for tissue diagnosis of lung masses, pleural disease and diffuse lung disease, as well as staging for oesophageal and lung cancer. The next logical step was to use VATS for the actual treatment of various conditions.

Sympathectomy for palmar hyperhidrosis proved very simple to achieve as the sympathetic chain is perfectly visualized and can be ablated over the 2nd-4th ribs with relative ease. Patients wake from anaesthetic with warm dry hands.

Thymectomy was initially performed for myasthenia gravis as an alternative to the disabling and disfiguring sternotomy, and found to be highly successful[1]. Undiagnosed anterior mediastinal masses could be removed in their entirety rather than by incisional biopsy, which combined diagnosis and therapy. Today, thymomas that do not show overt invasion into surrounding tissue, and

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are less than 4-5cm in diameter, can be managed with VATS thymectomy.

In patients requiring a lower lobectomy for small peripheral cancers (<2.5cm), if the oblique fissure is well developed, it is possible to perform a complete lower lobectomy and lymph node sampling using VATS. An incision of 5-6 cm is made without the need to spread the ribs, and the lung is gradually pulled out in a plastic specimen bag. Return to normal activity afterward is remarkably rapid. All forms of lobectomy have been attempted in dedicated units in Hong Kong, USA and Japan, but in Australia, this has been confined to lower lobectomy (the safest and easiest major resection).

Oesophageal surgery by VATS is also possible. A long myotomy can be performed for spastic motility disorders and the thoracic mobilization of an oesophagectomy can be performed, with removal of the oesophagus in a specimen bag. The stomach is then anastomosed to the oesophageal remnant in the neck.

VATS can achieve decortication of an empyema, although this is a tedious procedure for the surgeon. It is used for very high-risk patients in whom recovery of lung function is important, such as the morbidly obese. Older, frailer patients are best managed with debridement of the cavity and placement of a chronic drain through the bed of a resected segment of rib.

Mediastinal masses such as duplication cysts and neural tumours can also be resected by VATS.

Despite the above achievements, VATS does suffer a number of limitations. It can only be used to inspect surfaces, so lesions deep in the lung are unable to be localized or palpated. Margins cannot be palpated. Due to the small intercostal spaces and the rigidity of the chest wall, the angle of attack and degrees of freedom for instruments is limited. Retraction of structures such as the lung and exposure of the desired field may be suboptimal, and instruments cannot bend around corners or grasp tissue firmly yet gently. To overcome these limitations, we have had to devise a way of getting the surgeon's hand inside to help.

Hand Assisted Minimally Invasive Surgery

The idea of using the surgeon's hand during minimally invasive surgery once again came from the laparoscopic innovators. Hand-Assisted Laparoscopic Surgery, or HALS, has developed in the last few years, mainly to perform splenectomy, colectomy and fundoplication. In December 2000, at St Vincent's Hospital, this principle was put to the test in the thoracic cavity.

A 34-year-old male with a large sarcoma of the thigh was found to have a lung metastasis in the right lower lobe. A few days after his primary tumour was resected, he was returned to theatre, where a subcostal (modified Kocher's) incision was made and the chest entered by breaking into the retrosternal space and then into the chest. Previously VATS was not used to resect sarcoma metastases because of the need to palpate the lung to find the known metastases and to exclude any missed on CT scan. An extra lesion was found and both were removed with clear resection margins. Thus the term HATS – Hand-assisted thoracoscopic surgery – was coined[3]. This was then modified into a small Kocher's incision of 7-8 cm and a split in the diaphragm was made to allow the hand into the chest. The split was then repaired at the conclusion of the procedure (figures 1-3).

A randomised trial of HATS versus thoracotomy has been undertaken at St Vincent's Hospital, which showed improvement in post-operative pain scores with HATS when used for wedge resection of lung.

We have used HALS for one-off tasks such as retrieving a guaze swab accidentally left behind the proximal abdominal aorta after an aortic bypass procedure, and for clearing retro-crural (between aorta and inferior cava) lymph nodes from testicular carcinoma that could not be reached by laparotomy or thoracotomy[2].

Minimally invasive oesophagectomy was the last major frontier of thoracic surgery. Whilst the thoracic phase could be achieved, as explained earlier, the abdominal operation still required a large, vigorously retracted and difficult laparotomy to mobilize the stomach. Experience from laparoscopic Nissen fundoplication for severe reflux disorder, led the author to believe that this was

achievable with the used of a laparoscopic hand. The result was dramatic, with patients relatively pain-free despite major intervention in their abdomen, thorax and neck. Hand-assisted laparoscopic oesophagectomy or HALO was therefore established at St Vincent's Hospital (figure 4). After successfully performing a number of total oesophagectomies in this fashion, the next challenge was to perform an Ivor-Lewis oesophagectomy, with an anastomosis in the right chest.

As luck would have it, the mini-Kocher's incision in the right upper quadrant, used to perform the stomach mobilization, was ideally located to perform HATS surgery. Therefore an oesophagectomy was attempted of a localized adenocarcinoma of the oesophago-gastric junction. After the stomach was mobilized and passed through the hiatus into the chest, the diaphragm was split to allow access to the oesophagus under thoracoscopic vision. After mobilizing and dividing the oesophagus, a circular stapler was passed through the HATS incision/diaphragm split to perform the anastomosis. The procedure took only 4 hours (compared to 6-9 hours for the HALO above). As with HALO, the patient was able to eat normally on day 5 and discharged home on Day 9. This became known as the LATTE procedure – Laparoscopic and thoracoscopic

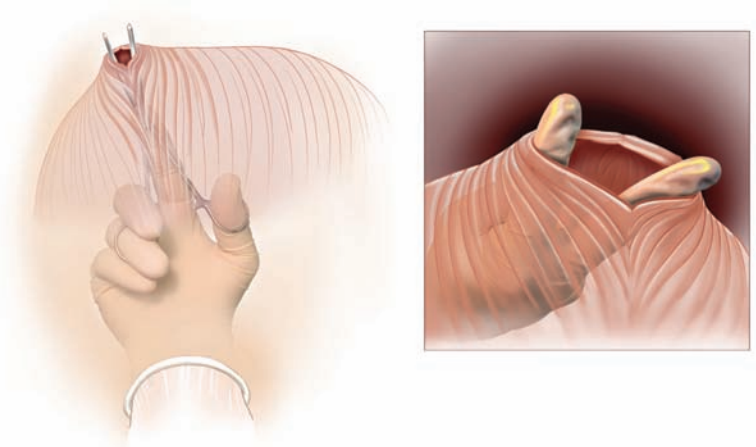

Figure 1. *The diaphragm is split in the line of its fibres with forceps, then gently dilated with the fingers.*

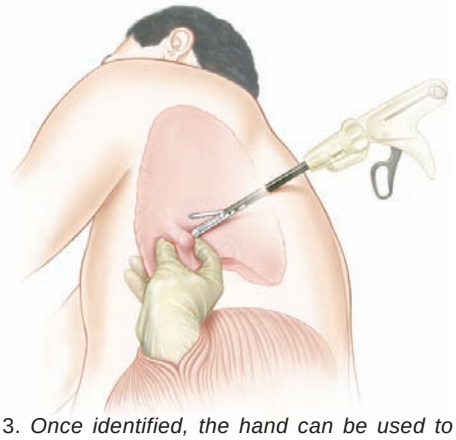

Figure 3. *Once identified, the hand can be used to present the lesion to the endoscopic grapser or stapler.*

Figure 2. *The surgeon's hand can localize lesions under thoracoscopic vision.*

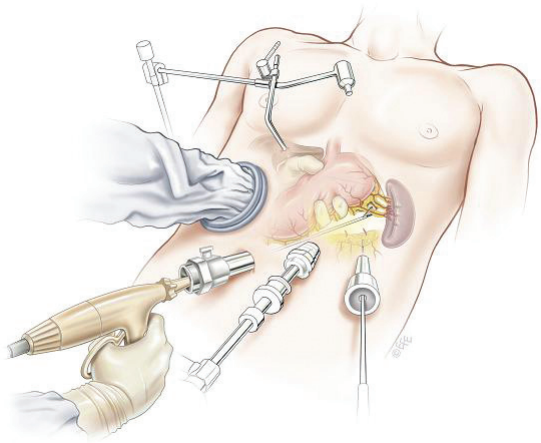

Figure 4. *The abdominal phase of the HALO procedure. The right upper quadrant hand port allows mobilization of structures and palpation, while the endoscopic instruments can be used to fashion the stomach into the neo-oesophagus.*

transdiaphragmatic esophagectomy. As squamous carcinoma of the oesophagus is now being out-numbered by adenocarcinoma of the lower oesophagus and oesophagogastric junction, this will become a more common procedure.

Conclusion

Minimally invasive thoracic surgery has now advanced to the point that, using VATS, HATS, HALS, HALO and LATTE, there is very little that cannot be achieved for the appropriate pathology. As these procedures have developed so rapidly, training of surgeons has now become the limiting factor for further refinements. Even young cardiothoracic surgeons have limited training in advanced laparoscopic surgery, and conversely, very few general surgeons have training in VATS (unless they complete both fellowships). Therefore only two trainees per year can obtain any exposure to these techniques in Victoria at St Vincent's Hospital, working on the public referral base of a single surgeon. Thus, it may not be until the next generation of thoracic and upper GI surgeons is trained, that the community's burden of disease from major cavity intervention can be significantly diminished.

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Glossary

HALO *H*and *A*ssisted *L*aparoscopic *O*esophagectomy

HALS *H*and *A*ssisted *L*aparoscopic *S*urgery

HATS *H*and *A*ssisted *T*horacoscopic *S*urgery

LATTE *L*aparoscopic *A*nd *T*horacoscopic *T*rans-diaphragmatic *E*sophagectomy

VATS *V*ideo *A*ssisted *T*horacic *S*urgery (or thoracoscopic)

Decortication Stripping the "rind" off trapped lung caused by empyema or neglected haemothorax

Empyema Pus in the pleural space with entrapment of collapsed lung by fibrin deposition and organization

Hyperhidrosis Excessive sweating due to abnormal sympathetic drive

Nissen fundoplication

Anti-reflux procedure involving the use of the fundus of the stomach to create a 360° wrap around the abdominal oesophagus after reducing and closing a hiatus hernia

Oesophagectomy, Ivor-Lewis

Laparotomy
: for mobilization of the stomach as an oesophageal substitute followed by thoracotomy for resection of the lower oesophagus and lesser curve of the stomach and re-anastomosis of stomach to oesophagus

Oesophagectomy, total
: Also known as McKeown or 3-stage oesophagectomy. Simultaneous laparotomy and neck incision for mobilization of the stomach as an oesophageal substitute and anastomosis in the neck. Subsequent thoracotomy for mobilization and removal of the oesophagus

Kocher's incision
: A roughly transverse right upper quadrant incision traditionally used for open cholecystectomy. Mirror image incision in the left upper quadrant often called "left-sided Kocher's"

Pleurodesis
: Fusion of the parietal and visceral pleura by means of chemical irritation, pleural abrasion or parietal pleurectomy

Sympathectomy, thoracic
: Division of the sympathetic chain below the stellate ganglion for palmar or axillary hyperhidrosis

Prostate Specific Antigen and Prostate Cancer

David Deam

Introduction

Prostate specific antigen (PSA) is the best test currently available for screening and follow up of prostate cancer. However it is not a perfect test and many aspects of its use are controversial.

What is PSA?

PSA is a serine protease whose normal role is to liquefy semen which aids sperm movement and fertility. It does this by its chymotrypsin like activity that degrades gel-forming proteins.

PSA levels in prostate tissue are about 10 million times those found in serum.

PSA is prostate specific, but is not cancer specific. The specificity of the test in males over 40 is about 70%, i.e. about 30% of men without prostate cancer will have a PSA level greater than 4 ug/L.

Besides prostate cancer, other causes of an elevated PSA include

- Benign Prostate Hypertrophy
- Prostatitis
- Prostate massage
- Ejaculation
- Bike riding
- Invasive prostate or bladder procedures

The sensitivity of the PSA test is about 80%. i.e. in patients with proven prostate cancer, about 20% will have levels of PSA less than 4 ug/L.

A recent paper in the New England Journal of Medicine showed that the higher the level of PSA, even within the reference range, the greater the chance of prostate cancer being present (1).

A patient who returns a positive PSA screening result of between 4 and 10 ug/L has an approximate risk of 20% of having prostate cancer while this risk increases to about 65% if the level is greater than 10 ug/L.

PSA and prostate size

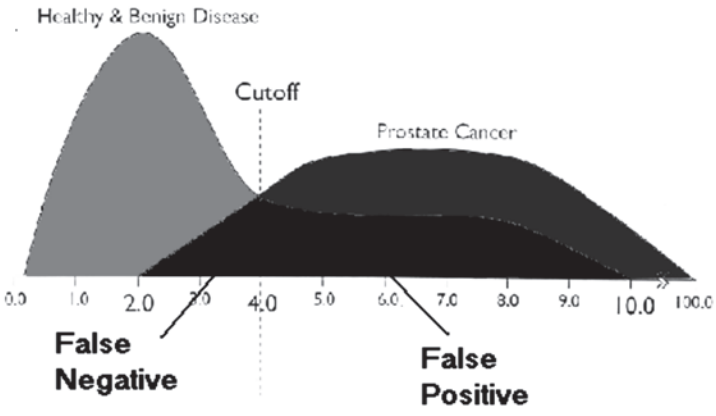
There is a strong relationship between prostate size and serum PSA level. This results in an age related increase in PSA levels due to the development of benign prostatic hypertrophy in older males.

To improve the interpretation of PSA, many laboratories use an age related reference range. Compared with a single cut off point, this has the advantage of finding more cancers in younger patients and reducing the number of unnecessary follow up procedures in older patients. However not all experts agrees with this strategy.

Free PSA and % free PSA

The majority of PSA that is measured in serum is bound (complexed) to alpha-1-anti chymotrypsin while the remainder exists as a free or non-bound fraction. Normally about 90% of PSA is bound and the remaining 10% is free.

PSA Test Characteristics When Screening For Prostate Cancer



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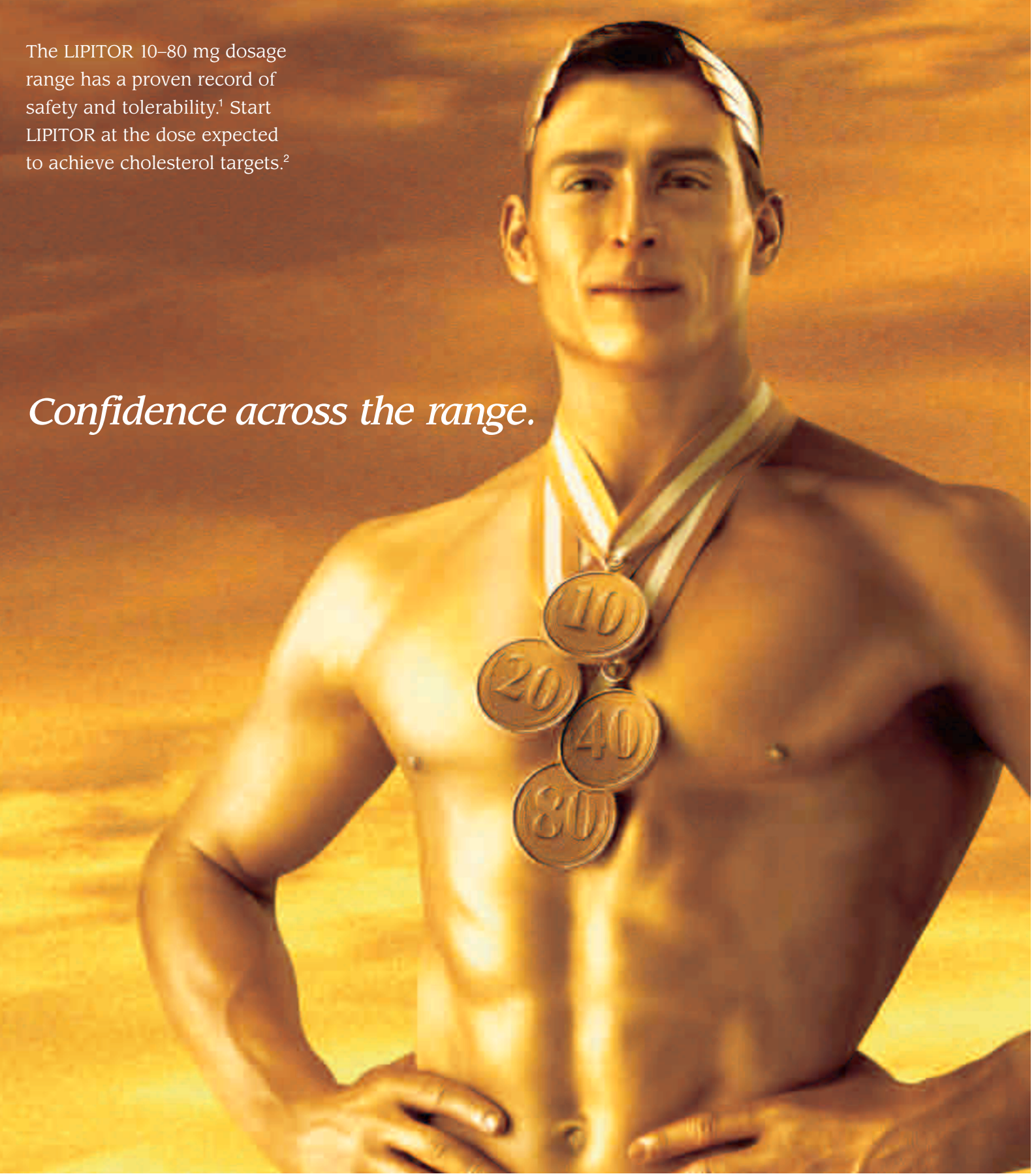

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In prostate cancer the level of complexed PSA increases and the percentage of the free fraction falls. The free fraction of PSA or Free PSA can be used as a further marker of prostate cancer. This is best used in patients who have borderline Total PSA values between 4 and 10 ug/L. However in many cases the results from this tests may also be in a borderline area.

PSA measurement

All of the larger laboratories use the same reference material (Stanford 90:10 Reference standard) to calibrate their assays as well as antibodies that react equally to free and complexed PSA. This results in most laboratories reporting similar results for PSA assays.

All laboratories also participate in internal and external quality control programs to prove that their PSA assays are working satisfactorily. This is one of the many conditions laboratories must comply with to be eligible to claiming Medicare benefits.

Note that the analytical variation in measuring PSA is about 5% and the biological variation in PSA is approximately 10%.

This means that the total variation that can be expected in PSA results in approximate 15%.

PSA after treatment

PSA is also very useful in evaluating patients with treated prostate carcinoma. The rate of fall in PSA depends on the mode of therapy being used. After radical prostatectomy the PSA level should fall to an undetectable level within several weeks of the operation. Radiotherapy and hormone manipulation will result in slower changes in PSA levels. Testosterone enhances PSA production and testosterone deficiency will result in a fall in PSA levels.

An increasing PSA level suggests advancement of the disease.

Medicare benefits schedule rules for PSA reimbursement.

The requirements for PSA reimbursement have changed slightly over the years.

In a patient who does not have known prostate disease, one PSA measurement may be performed in a 12 month period. In patients who are being followed up for known prostate disease, there is no restriction about test frequency.

For Free PSA reimbursement, the total PSA value must lie within the equivocal range.

Summary

- PSA is prostate specific, not cancer specific.
- PSA is an imperfect test, but the best we have at present.
- Free PSA% may be helpful in some situations.
- PSA is useful for follow up after treatment.

Reference

Thompson et al Prevalence of Prostate Cancer among Men with a Prostate-Specific Antigen Level d”4.0 ng per Milliliter N Engl J Med 2004;350:2239-46

From the Editor's Desk

A Good Thought !

Anonymous

A WOMAN SHOULD HAVE
one old love
she can imagine
going back to...
and one who reminds
her how far she has
come...

A WOMAN SHOULD HAVE
enough money within her
control to move out and
rent a place of her own
even if she never wants
to or needs to...

A WOMAN SHOULD HAVE
something perfect to wear if
the employer or date of her dreams
wants to see her in an hour...

A WOMAN SHOULD HAVE
a youth she's content
to leave behind....

A WOMAN SHOULD HAVE
a past juicy enough that
she's looking forward to
retelling it in her old age....

A WOMAN SHOULD HAVE
a set of screwdrivers, a
cordless drill, and a black
lace bra...

A WOMAN SHOULD HAVE
one friend who always makes
her laugh... and one who lets
her cry...

A WOMAN SHOULD HAVE
a good piece of furniture
not previously owned by anyone
else in her family...

A WOMAN SHOULD HAVE
eight matching plates, wine
glasses with stems, and a recipe
for a meal that will make her
guests feel honored..

A WOMAN SHOULD HAVE
a feeling of control over
her destiny...

EVERY WOMAN SHOULD KNOW...
how to fall in love without
losing herself...

EVERY WOMAN SHOULD KNOW...
HOW TO QUIT A JOB,
BREAK UP WITH A LOVER,
AND CONFRONT A FRIEND
WITHOUT RUINING THE FRIEND-
SHIP...

EVERY WOMAN SHOULD KNOW...
when to try harder... and
WHEN TO WALK AWAY...

EVERY WOMAN SHOULD KNOW...
that she can't change the
length of her calves, the width
of her hips, or the nature of her
parents...

EVERY WOMAN SHOULD KNOW...
that her childhood may not
have been perfect...but its over...

EVERY WOMAN SHOULD KNOW...
what she would and wouldn't
do for love or more...

EVERY WOMAN SHOULD KNOW...
how to live alone... even if
she doesn't like it...

EVERY WOMAN SHOULD KNOW...
whom she can trust,
whom she can't,
and why she shouldn't
take it personally...

EVERY WOMAN SHOULD KNOW...
where to go...
be it to her best friend's kitchen table...
or a charming inn in the woods...
when her soul needs soothing...

EVERY WOMAN SHOULD KNOW...
what she can and can't
accomplish in a day...
a month...and a year.

At the heart of effective 24-hour blood pressure control[1]

NEW
Coversyl 8mg tablet
PBS listed
No Patient Premium

COVERSYL®
perindopril

COVERSYL® (perindopril erbumine) 2mg, 4mg & 8mg Tablets. **Before prescribing, please refer to Approved PI Indications:** hypertension (2, 4, 8mg), heart failure (2, 4mg) - recommended in combination with a diuretic and/or digoxin. Safety/efficacy in NYHA IV not demonstrated. **Contraindications:** hypersensitivity to Coversyl, angioedema, pregnancy, lactation, haemodialysis using high-flux membranes, renal artery stenosis. **Warnings:** angioedema (+/- urticaria) - rare with Coversyl. Excessive hypotension possible in severely salt/volume depleted patients with impaired renal function, vigorous diuretic treatment or on dialysis. **Precautions:** assess renal function. Severe congestive heart failure - oliguria/ progressive azotaemia and rarely acute renal failure. Hyperkalaemia with renal impairment, potassium sparing diuretics, potassium supplements, especially in elderly. Avoid in renal artery stenosis. Cough, proteinuria, neutropenia/agranulocytosis. **Interactions:** potassium sparing diuretics and potassium supplements, lithium. **Adverse Reactions:** headache, asthenia, dizziness, cough. Less common reactions - consult Approved PI. **Dosage and Administration:** once daily. Hypertension – usual starting dose 4mg/day before breakfast. Titrate to maximum of 8mg/day (4mg in elderly). Nb 2mg starting dose recommended for patients at risk of ACE inhibitor-induced hypotension (including elderly, patients with impaired renal function, and diuretic-treated patients - refer to full Approved Product Information for details). Congestive heart failure - initiate therapy under close medical supervision with a diuretic and/or digitalis. Maintenance dose 4mg/day **Date of Preparation:** 08/09/2004 Approved PI available from Servier Laboratories (Australia) Pty. Ltd. 8 Cato Street, Hawthorn VIC 3122. Customer Service (Toll Free) 1800 33 1675 **PBS Dispensed Price – Aug 2004: 2mg - $19.47, 4mg - $24.76, 8mg - $42.84, 30 + 5 repeats** 1. Morgan T. *Br J Cardiol.* 1995;1:S7-S9

COV10/04 TAC1536

PBS Information: Coversyl is listed on the PBS as an agent acting on the renin-angiotensin system.

From the Editor's Desk

Letter of Resignation

Anonymous

This is an actual letter of resignation from an employee at a well known company of Computers in USA, to his boss. His boss apparently resigned very soon afterwards!

Dear Mr Baker, As an employee of an institution of higher education, I have a few very basic expectations. Chief among these is that my direct superiors have an intellect that ranges above the common ground squirrel. After your consistent and annoying harassment of my co-workers and myself during the commission of our duties, I can only surmise that you are one of the few true genetic wastes of our time. Asking me, a network administrator, to explain every little nuance of everything I do each time you happen to stroll into my office is not only a waste of time, but also a waste of precious oxygen.

I was hired because I know how to network computer systems, and you were apparently hired to provide amusement to myself and other employees, who watch you vainly attempt to understand the concept of "cut and paste" for the hundredth time. You will never understand computers. Something as incredibly simple as binary still gives you too many options.

You will also never understand why people hate you, but I am going to try and explain it to you, even though I am sure this will be just as effective as telling you what an IP is. Your shiny new iMac has more personality than you ever will. You walk around the building all day, shiftlessly looking for fault in others. You have a sharp dressed useless look about you that may have worked for your interview, but now that you actually have responsibility, you pawn it off on over-worked staff, hoping their talent will cover for your glaring ineptitude.

In a world of managerial evolution, you are the blue-green algae that everyone else eats and laughs at. Managers like you are a sad proof of the Dilbert principle.

Seeing as this situation is unlikely to change without you getting a full frontal lobotomy reversal, I am forced to tender my resignation, however I have a few parting thoughts:

1. When someone calls you in reference to employment, it is illegal to give me a bad recommendation. The most you can say to hurt me is "I prefer not to comment." I will have friends randomly call you over the next couple of years to keep you honest, because I know you would be unable to do it on your own.

2. I have all the passwords to every account on the system, and I know every password you have used for the last five years. If you decide to get cute, I am going to publish your "favorites list", which I conveniently saved when you made me "back up" your useless files. I do believe that terms like "Lolita" are not usually viewed favorably by the administration.

3. When you borrowed the digital camera to "take pictures of your Mothers birthday", you neglected to mention that you were going to take pictures of yourself in the mirror, nude.

Then you forgot to erase them like the techno-moron you really are. Suffice it to say I have never seen such odd acts with a ketchup bottle, but I assure you that those have been copied and kept in safe places pending the authoring of a glowing letter of recommendation. (Try to use a spell check please, I hate having to correct your mistakes.)

Thank you for your time, and I expect the letter of recommendation on my desk by 8:00 am tomorrow. One word of this to anybody, and all of your little twisted repugnant obsessions will be open to the public.

Never f*** with your systems administrator. Why? Because they know what you do with all that free time!

Regards

DON T. MESS MITME
Senior Design Consultant

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If you are interested in using the services of VCS, or interested in an educational update please contact either our Client Services Manager - Lisa Garay or our Liaison Physician - Dr Stella Heley on 03 9250 0300.

Victorian Cytology Service

Victorian Cytology Service Pap smears are free

From the Editor's Desk

Australian cervical screening program among the best in the world

18th November 2004

A review of Australia's National Cervical Screening Program, released today, confirms that Australia has one of the most successful cervical screening programs in the world.

The report, by the Australian Institute of Health and Welfare, *Cervical Screening in Australia 2001-2002*, shows that since the program started in 1991, deaths from cervical cancer have fallen by 61 per cent in the target group of women aged 20-69 years. Successful early detection through screening programs has contributed to this significant reduction.

Indigenous women have higher than average rates of cervical cancer and the government has supported the continued operation of an Aboriginal and Torres Strait Islander Women's Forum to provide advice on how to increase the participation of Indigenous women in cervical screening.

This is the sixth annual review of the National Cervical Screening Program and shows that across all age groups there were 745 new cases of cervical cancer detected in Australia in 2000. This compares with 1072 new cases detected in 1989, prior to the start of the program.

Cervical cancer has fallen from the 8th to the 18th most common cause of cancer death in women, accounting for 227 deaths in 2002. The report shows that abnormalities were detected in about 1.8 per cent of all Pap smears performed in 2002 or over 33,000 in total.

Increasing Pap smear screening rates is very important. Figures suggest that 90 per cent of cervical cancers can be prevented if all women between the ages of 20 and 69 have a Pap smear every two years.

The government has a strong record in funding and encouraging screening. The government spends about $100 million a year on cervical cancer screening. As part of the election policy, *Investing in Stronger Regions*, the government has committed $10.5 million over four years to provide more practice nurses in rural areas to undertake a wider range of procedures including Pap smears and other preventative health checks for women.

The government has also promised to establish a national bowel cancer screening program, for both men and women, to fight this terrible disease which claims 90 Australian lives each week.

Early detection is the best protection. The government encourages women to have regular Pap smears so that we can continue to beat cervical cancer.

Media contact: Kate Jordan, 0417 425 227

Editors' Note: This report has come at a time when Women's health issues are brought to notice and avidly debated.

From the Editor's Desk

Use of SSRI antidepressants in children and adolescents

(A statement by ADRAC dated 15 October 2004.[#])

The Australian Adverse Drug Reactions Advisory Committee (ADRAC) has reviewed data on the safety and efficacy of SSRIs* in the treatment of major depressive disorder (MDD) and other psychiatric disorders in children and adolescents. The data reviewed has included the US FDA analysis in collaboration with a group at Columbia University. ADRAC has also consulted again with the Royal Australian and New Zealand College of Psychiatrists and the Royal Australasian College of Physicians.

None of the SSRIs, and indeed no antidepressant, is currently approved in Australia for the treatment of MDD in children and adolescents (persons aged less than 18 years). Fluoxetine, but none of the other SSRIs, is approved in the US for MDD in young people without a specified lower age limit. Two of the SSRIs, fluvoxamine and sertraline, are approved in Australia for children and adolescents with obsessive compulsive disorder (OCD).

Assessment of the published and unpublished data available for SSRI use in children and adolescents indicates that there is evidence of an increased risk of suicidality, including suicidal ideation, suicide attempts and self-harm events, associated with each of the SSRIs.[1] The strongest association has been found with paroxetine and venlafaxine, but sertraline, citalopram and fluoxetine have also been implicated, with fluoxetine possibly having the smallest risk.[1,2] There are very few data for fluvoxamine.

Increases in suicidal ideation and behaviour during the early stages of antidepressant treatment are well-known clinical phenomena in adults. It is clear that these events can occur in children and adolescents as well. While the size of the increase compared to placebo is small, around 2 to 3 patients per 100, the effect is stronger with some SSRIs than others in young people.

In a recent study,[2] at the completion of therapy fluoxetine was beneficial for the treatment of depression in adolescents with moderate to severe symptoms of MDD. Treatment with fluoxetine plus cognitive behaviour therapy was more beneficial and decreased suicidal ideation compared with placebo by the end of the treatment period. *During therapy* with fluoxetine there was however an increase in some psychiatric adverse events (acts and ideation of suicide, self-harm, aggression, violence).

In general, clinical trials of SSRIs in children and adolescents have excluded severely depressed patients and have not adequately monitored participants for self-harm or suicide-related events. Other non-SSRI antidepressants have been subjected to even less scrutiny, and may be inefficacious and also associated with suicidality, as well as having other undesirable effects such as the toxicity in overdose of the tricyclics.

ADRAC recommends:

1. Any use of SSRIs in children and adolescents with MDD and other psychiatric conditions should be undertaken only within the context of comprehensive management of the patient. Management should include careful monitoring for the emergence of suicidal ideation and behaviour which may particularly develop early in therapy, or if therapy is interrupted or irregular because of poor compliance. Cognitive behaviour therapy, if it is available, may enhance the outcome in MDD.

2. The choice of an SSRI for a child or adolescent with MDD or other psychiatric condition should be made only after taking into account the recent evaluations of clinical trial data and the Australian product information (PI). Prescribers should be aware that the marketers of fluvoxamine and sertraline (indicated for OCD) advise against use in children and adolescents with MDD, and of citalopram, escitalopram, paroxetine, venlafaxine and fluoxetine warn or caution against use in patients aged less than 18 years for any indication.

3. Children and adolescents being treated for MDD with an SSRI should not have their medication ceased abruptly.

In addition, ADRAC asks that cases of emergent or worsening suicidal ideation or behaviour and self harm in children or adolescents treated with an SSRI be reported to aid understanding of what might be an idiosyncratic response to the medication ceased abruptly.

This ADRAC Statement is on the TGA web site at http://www.tga.gov.au/adr/adrac_ssri.pdf It has replaced the statement of 17 June 2004.
Aust Adv Drug Reactions Bull 23(6), Dec 2004

Editor's Note: *This reference is timely and is to be read in conjunction with Dr. Ng's research on Antidepressants at pp29.*

Continued pp52 "From Editor's Desk"

Travelogue and Overseas Aid

Vietnam

return to the homeland

Phillip Chiem

Nha Trang Beach

Ho Chi Minh's main round-about, outside Ben Thanh

Vivid images would conjure up each time my parents recounted their adventures whilst growing up in Vietnam. Stories of netting fish in the river fronting the house, climbing trees to eat refreshing tropical fruits and hawkers passing through the streets selling ready-to-eat meals and treats. It was really exciting for me to return to Vietnam for the first time since migrating to Australia. I was born in Vietnam in 1978 and my family migrated to Australia when I was one year old so this trip to Vietnam in February 2004 was going to be my first chance to realize all those vivid imaginations.

First Impression

We touch down in Ho Chi Minh City, towards the south of Vietnam and it's warm and humid atmosphere resembled that of the Gold Coast. My aunty is with me as a travelling companion. The streets are swarming with motorcycles and cars and they are just merely a foot apart from each other. We ride in the taxi and it seems all the give-way rules we use in Australia are thrown out as all the other motorcycles must give way to the taxi. So many times I thought we were going to be run over by motorcycles but they managed to avoid us. The taxi driver always drives with one hand on the horn. Whilst in Australia we use the horn to admonish other drivers for being careless, they use the horn as a courtesy when they're passing traffic. It's a dense city with wall to wall of multistory buildings. It is incredible that every street front in Ho Chi Minh City is a shop or an office for business. Everywhere you go it's more and more businesses and shops.

Shopping in Ben Thanh Market

The people

My first shopping experience begins with an overwhelming encounter with shopkeepers at the market. I've only just walked in the entrance to Ben Thanh Market and immediately I'm surrounded by a hoard of young attractive girls. They lock onto my arms and patronize me

Editor's note: *Phillip Chiem is scientist at VCS, he returned to his motherland and gave an account of his visit.*

Above: Buying meat at the market.

Right: Fruit and Veggies market.

telling me "you look wonderful with this shirt, please just try it on…I've got lots of beautiful tops for you." Luckily for me our local friend came to my rescue and fended me from the girls. It's just such a different environment to Australia where an incident like that would be a cry of harassment. The markets in Vietnam are what I regard as true markets. Whilst they're similar to Australia in that they sell all kinds of gifts and clothing, it is really astonishing how they sell the meat and fish. Many of the fish are still alive swimming in large buckets of water whilst the chunks of meat are set on display without any glass covering and refrigeration, save for a few ice blocks scattered around. It worries one as to the hygiene conditions but rest assured they aren't be able to sell it to you unless it was fresh. You can tell when you look at it.

Getting around

If you need to get around Ho Chi Minh City there are many taxis but if you want a bit of a thrill try taking the Motorcycle taxis. There are dozens of them. At just about any street corner you'll have a couple of them waiting to take you around anywhere you like. The most you're likely to pay is the equivalent of a couple of Aussie dollars. Mind you they don't have meters so it's just a case of giving what you think is appropriate. And be wary as they don't wear helmets either. Also there's the traditional cyclo (big pedal tricycle with a passenger seat in front) if you really want to feel Vietnamese. Beggars are common place in Vietnam. It's a big population with limited employment opportunities.

Cruising through rivers of Rach Gia

Being bred as an Australian, it was natural that the warm humid weather would influence me to wear shorts instead of pants. Yet somehow all the locals were wearing trousers as if it were a winter's day. It certainly made me stand out like a sore thumb and I was reminded that I would always be treated as a tourist.

Night on the town

The nightlife in Ho Chi Minh City is vibrant. When the sun goes down it's time for all the young people to come out on their freshly washed and styled motorbikes. And it's not just a guy thing. The girls are out there too either riding their own motorbike or sitting on the back of one embracing their man. It's also a chance for the girls to show off their latest fashion and gear.

Countryside

My uncle, cousin and grandmother in their ricefield.

The country life of Vietnam is where its true identity comes out. Out here life is about leaf walled huts and dusty dirt roads. This is the kind of life my parents grew up in and my main purpose of going to Vietnam was to experience it. I stayed with my Grandparents out in Rach Gia, South West of Vietnam. Here I was able to see how they cook over a woodfire stove, use water from their own tanks and wells, sleep on beds with no mattress, travel on motor powered canoes, produce their own harvest for a living and of course enjoy fresh tropical fruits from the back yard. If you own a TV in the country like my Grandmother does you can always expect the neighbours to drop in now and then. Many of them can barely afford to pay for electricity let alone own their own TV so it's a privilege to have both. It is just common decency to share your TV with the neighbours.

Final Impression

Vietnam has come a long way since the Vietnam war in the 1970s. It is a country that has transformed itself in a way few would have imagined two decades ago. The economy is booming and tourism is a major reason for it. With so much money invested in Vietnam from outside it is becoming more and more attractive to Westerners as a holiday destination.

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Telephone (03) 9523 2244
Email dayan@ac-pl.com

The sky is the limit

S K Tang

Hot air ballooning is an exhilarating experience. I was given this opportunity as a Christmas present by my daughter Mimi. Being scared of heights, I really had to put on a brave front when it was time to take the ride. This was scheduled for Saturday 27th November but the weather was not conducive, with winds at 40 knotts so we were informed by phone at 3.00am in the morning that the ride was cancelled. In the evening a call came through that the ride was re-scheduled to Sunday 28th and we were to meet in the foyer of the Hilton Hotel downtown in Melbourne at 5.00am.

On Sunday morning we woke up at 4.00am to just make the appointment in time. There was a short briefing as to where the launch would take place. We had to sign an indemnity waiver stating that we acknowledge danger pertinent with such sport. This done, we were driven to Faulkner Park opposite the Alfred Hospital. There we were all instructed on safety precautions and were politely asked to assist in preperation of the balloon inflation.

Our pilot for the day had an assistant to help him unload from a trailer the deflated balloon which was laid folded flat on the ground. It was then inflated with a huge fan directing air into the cavity of the balloon. When it was well inflated the air was heated by a poweful blow-torch, this manouver caused the balloon to rise up in the air. We were told to hastely climb into the passenger basket attached to the balloon by ropes and thick tapes. There were eight of us, all standing quite close but comfortably next to each other in the basket, facing outwards.

When we were ready to take off, we were instructed again on safety procedures, especially when landing; a padded divider in the centre of the basket would form a cushion and loops of rope attached to the side of the basket for holding on to. This would help us brace ourselves in case of a "rough landing". When all passengers were secure and comfortable the pilot gave a blast from the blow torch flame and we ascended slowly and steadily to a height of 1,200ft, then 1,800 ft and finally to a height of 2,400 ft.

The trees and well wishers on the ground beneath us seemed to shrink with the distance of seperation.

There is no directional steering possible, the progression depending on the winds with forward or backward progression only by negotiating between layers of the atmosphere where winds prevailed at different directions and speed. To achieve this shift, a blast of hot air would cause the balloon to rise up into the next layer of atmosphere, catching the wind and moving in its direction of flow.

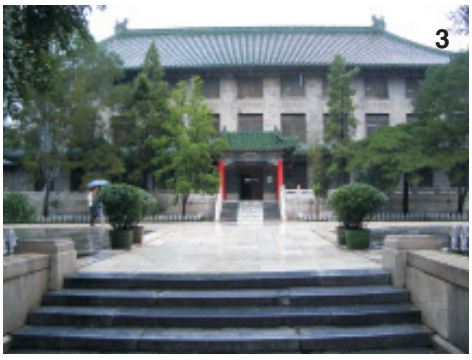
Once up and away, we excitedly began to identify landmarks and significant buildings, with better than average accuracy. We travelled from Faulkner Park in Prahran out to Port Melbourne and with the manouvering of the balloon between strata of the atmosphere, we were able to go across to Kew, and to Ivanhoe, identifying Kew Cottages and the Yarra Golf Course along the way. After about an hour of magnificent scenery we landed on the playground of a Primary School in Ivanhoe. The landing was suprisingly smooth; I felt two small jolts before the basket came to rest firmly on the ground. From here we were taken by motor transport (in a Toyota Land Cruiser) to the Hilton Hotel where a champagne breakfast awaited. After the meal we were each presented with a "Certificate of Ascent ".

The cost of the experience is $320 all inclusive. It was certainly a worthwhile experience, a "once in a lifetime " episode which I thoroughly recommend. This is one Christmas gift I truelly appreciated. Other passengers revealed the balloon ride was a birthday gift, and one couple celebrated their wedding anniversary while on-board. I guess the best present for me was the cure from altophobia!

Peking Union Medical Centre and Chang Chun

Khai Yuen Tang

In August 2004, Happy Tang and the author were invited to the First China Japan Conference on Cyto-Pathology in Chang Chun (translated means Eternal Spring), the capital of Jilin Province some 2000 miles away from Beijing, in North Eastern China. They were guests of



Here are some photographs which are of interest taken at PUMC and Chang Chun.

Pic 1. Main Entrance of PUMC;

Pic 2. Another view of Main Entrance of PUMC;

Pic 3. Entrance to second Building of PUMC;

Pic 4. Exit from the back of the second building. The passage leads from the exist towards the camera and in turn leads to the third building across a road.

Pic 5. Cytology Conference in Chang Chun.

Pic 6. Dr Sun and other members of staff of the Cancer Hospital Beijing. The notice board in the background shows the staff doctors of the Hospital with their qualifications and dates and times of attendance. This information board enables patients to choose their doctors;

Pic 7. The Author and Happy Tang with Prof Wu of the Chinese Academy of Medical Sciences visiting Clear Lake Park in Chang Chun;

Professor Yun Tian Sun the head of the Pathology Department of the Cancer Hospital in Beijing. PUMC and the PUMC Hospital (PUMCH) is a conglomerate of three buildings of the Peking Union Medical College (PUMC). The PUMCH is both the clinical medical college of PUMC and the Institute of Clinical Medicine of the Chinese Academy of Medical Sciences. It is a comprehensive hospital combining medical treatment, scientific research and teaching. It is one of the guidance centres designated by the Ministry of Public Health of China for difficult and complicated cases. The Hospital has continuously held a leading position in the medical field in China.

Pic 8. Courtyard between first and second buildings of PUMC;

Pic 9. Entrance to the third building which is the Convocation Hall of the PUMC. This picture is taken from the end of passage way leading from the second building;

Pic 10. Tea is being served!

Pic 11. The Author at Clear Lake Park in Chang Chun feeding a deer;

Pic 12. Prof Wu and members of Staff of Jilin Hospital, Chang Chun inside a Restaurant. This has to be one of the largest restaurants anywhere and can seat three to four hundred guests easily;

Pic 13. Inside the restaurant.

The Hospital, serving a population of 20 million, has twelve surgical departments, fifteen non-surgical departments and fifteen medical technology departments. PUMCH provides outpatient services for sixty two specialties. There are two departments providing outpatient services for special care, eight clinical treatment research centres, one emergency centre and one health care check-up centre in the Hospital. The average daily number of outpatients and emergency cases is over 5,000. There are fifty five wards, two haemodialysis centres, thirty seven operating rooms, one hyperbaric chamber and seven research centres of medical treatment.

The Conference that we attended was the First China-Japan Conference on Cytopathology. Happy presented a paper on Cervical Cancer at this conference. Although organised by the Department of Cytology of the Cancer Hospital in Beijing, the Conference was held in Chang Chun. This town, although founded several hundred years ago, has recently been almost completely revamped and is now a very modern city with wide tree-lined boulevards capable of handling four lanes of traffic each way. The city is clean and has some very modern buildings. There is a golf course which is very well kept, in one of the suburbs, and because it snows in winter, there is also a ski-jump in a skiing resort just outside the city.

We had a wonderful time both in Beijing and Chang Chun and are looking forward to the next time that we visit. Perhaps in 2008 we can do the trip again and see the Beijing Olympics at the same time.

A 30 day cruise on a mega cruise ship

Frank Teoh

We had previously cruised with the P&O Line to the South Pacific and were eager to travel with them again, this time, almost halfway around the world (from Laem Chabang in Thailand to Venice in Italy). The time of year, March, was favourable in terms of the weather. We would be sailing with, and not against, the currents in the Indian Ocean. The rest of the journey would be a piece of cake for those challenged by motion sickness. So we read through the thick booklet that supplied us with all the details we needed to know and proceeded to book our cruise.

The basics

The cruise ship was the Star Princess of the P&O Line. It carried a crew of 2000 and has capacity to carry 2500 passengers. Obviously the cost varied with the location (ie, which deck) and size of the stateroom selected. The average cost of a shared stateroom with a balcony was around AUS$7,500 per person for the 30-day cruise. On top of that there was a compulsory gratuity of US$10 per passenger per day for stateroom and dining room staff. A 15% gratuity was also added onto bar charges and liquor ordered in the dining room. Whilst on board, all expenses not covered, eg, day tours, gaming at the casino, alcohol, were charged directly to one's stateroom account. Besides these mundane details, the cruise information booklet also provided valuable information regarding dress requirements, shipboard amenities, and details of on-shore excursions (down to the degree of physical effort to expect to experience).

The ship

The ship lived up to our expectations. It was very new and impressive. Its size left other cruise ships in the harbour for dead! The decor was grand in the public areas.

The ship had outstanding facilities. There were a number of swimming pools and spas, many decks for lazing and sunbathing, a casino, gym, several theatrettes, bingo-hall, library, card room, bars, restaurants, Internet café and nightclubs. And for a retail fix, one could always indulge at the shops and boutiques offering duty free cosmetics, gifts, toys, etc. A beauty parlour and a hairdressing salon were also available.

The food was good with meals being served practically around the clock. If one wanted a change from the ship's dining rooms, one could choose to eat at the two restaurants that served different menus.

The Itinerary

The ship sailed from Laem Chabang to Vung Tao (the port for Ho Chi Minh City in Vietnam) to Singapore, Port Kelang (Malaysia), Cochin and Mumbai (India), Salalah (Oman), Aqaba (Jordan), Safaha (Egypt), up the Suez Canal to Port Said (Egypt), then onto Rhodes Island and Kusadasi (Turkey), Athens (Greece), Dubrovnik (Croatia) and finally to Venice.

The cruising life style

The beauty of cruising is that you can choose a holiday that is exactly what you want. You can be really laid back and just relax or you can participate in activities from morning to night every day. A daily newsletter informed us of the activities available for that day. They included lectures, craft sessions, quizzes, bingo, movies, cabaret shows, competitions, etc. Our stateroom had a 24-hour TV service. For exercise, one could use the swimming pools or the gym, attend an exercise class or simply walk on the deck. The games room was well stocked with playing cards and a variety of board games, including mah jong. As for meals, one had to be careful not to add the extra inches too quickly, most meals being buffets or having multiple courses. In-house entertainers provided nightly shows including dance troupes, magicians and singers. For night birds, there was always dancing at the nightclubs or gambling at the casino. So, we would say that most, if not all, aspects of a fun-filled holiday were available.

Land Tours

All land tours were optional. One could book them via the cruise ship and not have to do anything else except get off the ship onto the waiting tour coaches. The more independent minded or adventurous could take the option of doing their own thing – the only worry being to make sure you got back to the ship before it sailed!

Many of the land tours towards the end of the cruise were to top tourist attractions, namely, Rhodes Island, Ephesus, Petra in Jordan, the Pyramids and the Temple of Luxor in Egypt and the Acropolis in Athens.

Conclusion

Would we go cruising again? Probably "yes" but not on a mega cruise ship. It had the upside of less of a problem with motion sickness and the great variety of facilities on board. But it also had its downside such as long queues to get on and off the boat for day trips. This problem was inevitable as too many people (passengers and crew) were using the only 2 gangways available at each port of call.

On the whole, the 30 day cruise was a very relaxing way of seeing a large number of very interesting destinations in many different countries without the hassles of packing/unpacking, checking in and out of hotels and waiting in airports. It was a memorable highlight of our travelling adventures.


Petra Ruins


Footpath to Petra Ruins.


The Pyramids - Geza, Egypt.


The Acropolis - Athens.

To Africa, with love
Project Africa

Jun Yang

Community and Compassion has been a dominant theme threading through many activities in ACMAV in recent years. Earlier this year, we were given the unique opportunity to not only contribute to our own local community, but to an international community in need.

Project Africa was introduced to us by Dr Benny Foo. Having retired from the presidency earlier in the year, Dr Foo remains an active committee member with a passion for helping the needy and a keen eye for charitable projects. He brought to our attention the African Project and shared with us the story of Dr Ken Henry.

Dr Henry is the founder of the project. He trained and worked in various other fields prior to the current initiative, starting off as a program controller for the Profoundly & Multiple Handicapped at St Nicholas Hospital, then as researcher and lecturer at the Melbourne State College on Intellectual and Physical Disability, followed by management of a Youth and Physical Rehabilitation Facility in Darwin. It is true to say that he has always dealt with the disadvantaged and those in need. In the 1980s, he travelled to Hong Kong, China and Japan to train in Traditional Chinese Medicine, acupuncture and TENS, and established the Bayline Natural Therapies Group in Redcliffe (Queensland).

ACMAV President Frank Thien contributes to the $2,500 raised by members at the Annual Conference, accompanied by Drs Peijian Zeng and Benny Foo.

Project Africa came to life in 1997, when Dr Henry visited Africa for a trade show and discovered a community in need. He was struck by the devastating health crisis facing the remote communities in Africa, where 25.8 million children and adults were living with HIV or AIDS and 350 people would die from the illness every hour. He has since made three to four visits to the country each year, visiting hospitals in rural Tanzania, Uganda and South Africa, and sent out numerous shipments of medical equipment, medications and other primary care products such as eyeglasses to the poor communities. Apart from medical assistance, he also made an effort to improve their social well-being. From starting a youth employment program in Tanzania that saw the self-employment of over 800 youths, to the establishment of a training program on the use of TENS for pain control for nurses in Uganda, Dr Henry has dedicated himself to the advancement of healthcare and social welfare in the Central Eastern African countries. Along with other health professionals and volunteers (from the community of Redcliffe), he has formed The Africa Project Medical Services Team. The team will visit Uganda again in December of 2004 with the aim of educating local medical staff on the non-pharmacological management of pain, the importance of nutritional medicine and the prevention of diseases such as HIV.

Dorevitch Pathology

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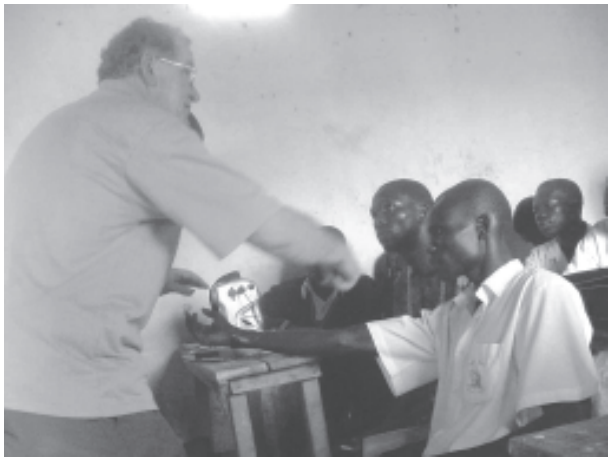
Such a project needs sustenance and support from the more developed communities at home. So, fortunate for us, Dr Henry made contact with Dr Foo and gave our association an opportunity to extend a helping hand. He made an appeal for second hand computer equipment to create employment opportunities for the locals in Uganda, to permit ongoing medical education via the internet, and to introduce telemedicine in the near future. Other "wanted items" included common medications (in particular, antibiotics, analgesics and antihypertensives), second hand medical equipment such as chairs and sterilisers, and clothing and toys for the children.

The appeal was announced to the ACMAV membership via newsletters and at various education seminars. Computers, ECG machines, sterilizers, centrifuge machines, medical books and toys were the main items that came forward, along with $2500 raised at the ACMAV Annual Conference Dinner and 12 boxes of medications. Dr Foo mobilised his own family and friends to collect, deliver and pack all the goods received in preparation for shipment. They spent countless hours over quite a few weekends to pack and label over 75 boxes of goods! Worthy of special mention is Dr Su Lan Foo, who single-handedly raised over $2000 and collected 11 monitors with 4 working computers and many bags of clothing and toys. Another special mention extends to Dr Robert Gan, an orthodontist and naturopath, who contributed a dental chair, 3 hospital beds and a key board. Courtesy of CCC Couriers (tenant of ACMA House) all the goods were successfully delivered to the airport where a container was waiting for their transport to Uganda.

This project could not have been possible without the initiative of Dr Ken Henry, or the volunteers who went on the trip with him, or Dr Benny Foo who inspired and mobilised our association, or all the individual members (and non-members) that contributed in their own way. We may only be able to contribute a tiny bit to the needs of developing countries and disadvantaged communities, but every bit counts, and after all "for any change and movement in the human community, the initiative must come from individuals".



Northern Exposure

Min Li Chong

Vancouver is so similar to Melbourne that it was easy to fit right in. No wonder, it has a population of 2 million with 25% of the population being ethnic Chinese. Vancouver in British Columbia, Canada was the starting point for our journey to Alaska's Inside Passage. For 7 days, we cruised the picturesque Inside Passage onboard the Island Princess. The Princess Cruise Liner made famous by the TV series "The Love Boat".

Alaska's Inside Passage is truly magnificent. It has over 1,000 islands, 1,000 miles of coastlines, with massive glaciers such as the Glacier Bay National Park and mountainous ranges. In 1896, gold was discovered in "The Klondike", known as the Yukon Territory and brought about the largest immigration into Alaska. Nowadays, tourism features prominently in Alaska's economy.

We spent the first day at sea. It was an excellent opportunity to explore the ship and investigate the shops and activities. It was very different from my first cruise to the Caribbean many years ago. The average age of people on the cruise was at least 60 years old, many of them required a walking aid (a SPS, PUF or wheelie frame) or a wheelchair. Queues to the theatre were easily formed, only because they walked very slowly. They were also bigger people, and lifts were the favourite route of transport. There was of course ample opportunity for anyone to use the gym and fitness room at anytime. There was no midnight buffet available but 24-hour buffet was always available besides the fine dining at the formal restaurant. One could eat as much as one could in the 2-hour session or choose Italian with a 20-course banquet or Creole/Cajun food at the Bayou Café. One could not forget the Grill Bar for burgers and chips, the Pizza Parlour or room service. Then there was the nightly entertainment with the unforgetable opening song made popular by Ricky Martin, "She Bangs". A good wake up call for all to shake the body!! It was very fitting for the general audience.

Ketchikan

We arrived in Ketchikan the early hours of the morning. It was discovered by Captain George Vancouver in 1793. He named his discovery, Ketchikan after his friend, who was the Viceroy of Mexico at that time. Ketchikan is located on the western shoreline of Revillagigedo Island, in the heart of the Tongass National Forest. In 1883, the first white settlers came to Ketchikan and built a fish cannery. It was then followed by more than a dozen canneries and Ketchikan became known as the Salmon Capital of the World. In 1897, mining contributed to the growth of the settlement with the Gold Rush era. The main income now is tourism with hundreds of cruise ship calls each year. There are many excursions offered to the salmon hatchery, watching bears feeding on salmon, salmon bake for lunch, salmon fishing and jet boating in Salmon Falls or one can

just stroll around town shopping. Ketchikan enjoys a lush and green landscape all year round due to the generous 162 inches of precipitation which includes about 32 inches of snow. It has a population of 15,000.

Juneau

Our next port of call was Juneau. It is located on the mainland of southeast Alaska, in the Tongass National Forest, the largest temperate rainforest in North America. It is one of the largest cities in the United States in terms of acreage but it still has a small town frontier atmosphere. Today, the population is approximately 30,000. The history of Juneau dates back to 1880 when Richard Harris and Joe Juneau, led by a Tlingit Indian named Kowee, discovered gold at the mouth of Gold Creek. This discovery led to the founding of a new town in 1906. Out of the discovery came three of the largest goldmines in the world. By the end of the World War II, more than 150 million in gold had been mined. It is now the capital of Alaska, only accessible by air or by the waterways.

Alaska was purchased from Russia at the end of the American Civil War for $7.2 million at 2 cents per acre. Alaska joined the Union and gained statehood in January 1959. The average Alaskan is young with a median age of 29. According to the 1990 census, the population of Alaska is just over half a million; 15 % are Alaskan natives. Over half of the population lives in the Southcentral region near Anchorage.

The most famous glacier in Juneau, is the Mendenhall Glacier. The Mendenhall Glacier flows 12 miles from its source, the Juneau Ice Field and has a 1.5 mile wide face. It is easily accessible by road or one can splurge and travel by helicopter to land on the glacier and have a gentle stroll on the icy fields. The glacier is constantly moving as it flows about 6 – 7 feet each day.

Skagway

Skagway was known to thousands of hopeful gold prospectors as the gateway to the gold fields. It boasted the shortest route to the Klondike but it was far from being the easiest. Over a hundred years ago, the White Pass Route and the Chillkoot Trail were used by countless stampeders. The Chillkoot Trail was steep and treacherous and combined with the harsh environment, scores of people died. The gold rush made Skagway in 1898 the largest town in Alaska with a population of 20,000. Hotels, saloons, dance halls and gambling houses prospered and tent cities popped up to house the gold seekers. 100,000 men and women headed north but only 30,000 - 40,000 actually reached the goldfields of Klondike. 4,000 or so prospectors found gold but only a few hundred became rich. Today, the population of Skagway is less than 1000. The name Skagway means “Home of the North Wind” in Tlingit. It is also the town where the TV series “Northern Exposure” was filmed.

The most spectacular tour from Skagway is the ride aboard the White Pass and Yukon Route scenic railway. The route climbs from sea level in Skagway to almost 3000 feet at the summit in just 20 miles and features steep grades. The tight curves called for a narrow gauge railroad. The construction of the railway was a great feat and has been designated as an historic civil engineering landmark in 1994. The construction overcame design challenges, granite mountains, steep grades, cliff hangings turns and harsh weather conditions. The rail ended in Whitehorse, 110 miles away from Skagway. The most spectacular scenery is from Skagway to Lake Bennett, featuring the Glacier Gorge and the Dead Horse Gulch, making the steep almost 3000 feet climb to the White Pass. We took the bus along the White Pass to Lake Bennett and then caught the train back to Skagway from Fraser, British Columbia.

Glacier Bay

When Captain George Vancouver sailed through the ice filled waters of Icy Straits in 1794, Glacier Bay was little more than a dent in a mountain of ice. Less than a century later, John Muir, the naturalist, made his discovery of Glacier Bay and found that the end of the bay had retreated 40 miles from the Icy Straits. Today the glacier that bears his name, Muir’s Glacier, has receeded. The area left by the glacier, has now been recolonised by plants and animals. Glacier Bay has the highest concentration of tidewater glaciers. It is also a habitat for a wide variety of marine life. One can see sea otters and whales in the area. The main glaciers in Glacier Bay are the Margerie, John Hopkins and the Grand Pacific Glaciers. The Margerie Glacier is about 1 mile wide with an ice face that is about 250 feet high above the waterline, and its base is about

100 feet below the sea level. The Grand Pacific rises about 150 feet above the sea. The Grand Pacific Glacier looks dirtier as it contains rock debris particularly at the sides. Avalanches, rock slides and the scouring of the valley by the ice add to the accumulation.

Glaciers are formed when years of snowfall compact into ice and begin to slide down the mountainside. Gravity and meltwater combine to drag the ice mass towards the sea. The glaciers in Glacier Bay are remnants of the Little Ice Age which began 4000 years ago. Although it took thousands of years for Glacier Bay to fill with ice, it took only 200 years for it to melt. Glacier ice is blue because blue is the only colour that is not absorbed by the physical characteristics of the ice molecules. Glacier Bay is very deep at about 1000 feet deep. The bay is part of the Pacific Ocean and has been carved out by a glacier and then filled with saltwater as the glacier retreated, thus creating a fjord.

College Fjord

In 1898, an expedition traveled up the long narrow reach of a fjord on the northern shore of Prince William Sound. The goal of the expedition was to find a way to the Klondike gold fields that did not require a passage through Canada in the Yukon Territory. However, instead of gold fields, they found an enormous ice field - more than sixteen tidewater glaciers. All of the glaciers in this fjord are named after colleges on the east coast of the USA.

This enormous ice field is located in the northern sector of Prince William Sound, roughly half way between Whittier and Valdez. At least five glaciers are observed at the foot of College Fjord. The most prominent is the Harvard. The Harvard Glacier has an enormous 5-mile wide wall of ice, is located just at the head of the fjord. It is one the few advancing glaciers in the area. It is very active in calving. "Calving" is the thunderous phenomenon that occurs when salt water melts the glacier snouts and huge pieces of ice crack off the face.

Fairbanks

After the College Fjord, the cruise ended in Whittier. From Whittier, we were transported to Anchorage to catch a plane to Fairbanks, a gateway to Alaska's interior. Unfortunately when we reached Fairbanks, the skies were cloudy and smoky due to the bushfires all summer long. We were unfortunately not able to see the Northern Lights.

Fairbanks was founded in 1901 and again, the discovery of gold in the area featured prominently in the city's development. We visited the El Dorado Gold Mine which runs a two hour train tour that winds through a reconstructed mining camp. We were also shown their current methods of panning for gold and each of us had an opportunity to pan for gold. Of course, the real "gold mine" is the tourist. One can have a locket made up to store the little specks of gold that one had panned. What a good environment to spend our money at the shop when one was provided with free hot chocolate, coffee, tea, and delicious macadamia and peanut butter cookies.

In the afternoon, we traveled on a riverboat, Discovery III along the Chena River. Along the way, we were shown how good the bush pilots are in taking off and landing their small planes; we saw a sled dog demonstration by Susan Butcher, a four time winner of the Iditarod; and we visited a replica of an Athabascan Indian Village.

The next day, we went on the Alaska Railroad to Denali in special cars, with full domed glass ceilings to view the natural beauty of Alaska. Unfortunately not much could be seen due to the unexpected change in weather, and our tour of the Denali National Park was cancelled. Alas, there

was no opportunity to see bears, caribou or moose. Mt McKinley in Denali is the tallest and largest on the North American continent. Our next stop on our tour was Anchorage via the railroad again. The scenery changed from the snow covered mountains of the Alaskan Ranges to the autumn colours of the vegetation. There were still some reminders on the landscape of The Good Friday Earthquake that occurred in 1964.

Anchorage

Anchorage is the first port of call for many visitors to Alaska as it is an epicenter for the rail, air and highway. Not only that, it has close proximity to glaciers and state parks that are less than an hour away. The discovery of oil on the North Slope in 1968 and the construction of the Trans-Alaska pipeline played a major role in making Anchorage the financial center of the state. The Elmendorf Air Force Base is also located in Anchorage, with its squadrons of F-15's.

Alaskan Native Heritage Centre

This is an excellent centre to learn about the ways of the natives in Alaska. The program focuses on the ability of Alaska's first people to sustain themselves from the resources available within the diverse regions of the state before and after Euro –American contact. We were given presentations on native story telling, native games presentation and dance performances. The centre also constructed 5 traditional structures found in villages before the contact with other cultures.

Alaska Native Medical Centre (ANMC)

The medical centre provides medical services to eligible Alaskan Natives /American Indians. The medical center is native owned and managed, providing care to members of Alaskan native tribes. ANMC provides a full range of medical specialties and services. ANMC is a 150-bed hospital and a primary care centre. It includes a 16-bed Intensive Care Unit and 4 NICU beds. They treat a lot of trauma in particular head injuries sustained from 4 WD vehicles and snowmobiles. They have about 1300 deliveries per year, mainly targeted at high risk deliveries. ANMC also provides housing facilities for patients and relatives who have to travel from their villages to receive medical treatment. Tertiary care services are provided for Alaskan natives referred from all of Alaska and ANMC is also responsible for primary care services for Alaskan Native residents of Anchorage and of the 55 small villages located throughout the Southcentral Alaska. Most patients are under a case worker who works closely with their treating doctor. Funding of their services is from various government authorities, private foundations and third party insurances.

The major illnesses in the Natives are lung and lip cancers due to chewing tobacco and diabetes. In the Aleutian population, 30 % are in the pre diabetic state. In the villages, tuberculosis and hepatitis are the major causes of illnesses due to the poor water supply. Dental caries are common due to the high consumption of soda pop. It only costs US$1 to buy soda pop compared to US$3 for a bottle of water and US$7 for a gallon of milk.

There is also a Traditional Healing Unit with tribal doctors. They have to be recognised by their village community and tribe as Tribal Doctors. They utilise herbs, massage and the "healing circle" in their treatment regime. The "healing circle" is akin to traditional counselling, dealing in grief, relationship issues, domestic violence, psychological and spiritual issues. An elder sits in council and all participants sit in a circle. A "talking stick" is passed around, giving the person permission to speak. The ANMC also has an extensive collection of native art and artifacts; some are available for purchase at their auxiliary shop.

Alaska is truly the final frontier. The beauty of the wilderness, mountain ranges, rivers, lakes, glaciers, fauna and the flora will continue to fascinate travellers for all times. I end this with a poem by Marie Drake, saluting Alaska's flag:

"Eight stars of gold on a field of blue – Alaska's flag. May it mean to you

The blue of the sea, the evening sky, the mountain lakes, and the flow'rs nearby;

The gold of the early sourdough's dream.

The precious gold of the hills and streams; the brilliant stars in the northern sky,

The "Bear" – the "Dipper" – and, shining high, the great North Star with steady light,

Over land and sea a beacon bright.

Alaska's flag – to alaskans dear,

The simple flag of a last frontier."

Project Outer Mongolia

Robert Gan

My wife and I have just returned from Outer Mongolia. We were on a humanitarian aid program sponsored by ADRA (Adventist Disaster and Relief Agency) and World Vision. We went to Ulaan Bataar, the capital of Outer Mongolia as well as to an outlying town called Muren in the Husvghul province (adjacent to Russian Siberia).

Together with a team of 6 other Australians (consisting of a geologist, well-construction engineer, surveyor, social worker, education specialist, builder and plumbers) we spent 4 days in the capital city, and 8 days in the rural town of Muren.

One of the reasons why we chose Mongolia, was that we heard many reports of high unemployment among the young people of Ulaan Baatar and many street kids that are living in the sewer pipes under the roads to keep warm during the extreme Mongolian winter. We wanted to see first hand the social situation, and how best to help these young people. For comparison, we also chose a very rural town called Muren, being the main town of the nomadic tribesmen, called Khazaks and Tartars, who have roamed the Gobi deserts since time immemorial.

When we mention Mongolia, most of us would conjure up memories of the history lesson we learned when we were young. We will most likely remember the Mongolian empire under the mighty Genghis Khan, whose nomadic warriors ruled a vast area in Europe and Asia stretching from Caspian Sea in the west (Yugoslavia) to the Korean peninsula in the east, and from China to the Indian continent in the south. It was Kublai Khan (grandson of Genghis Khan) who ruled China. The famous Venetian missionary Marco Polo visited the Imperial courts in Khanbalik (now named Beijing). The Mongolians pride themselves in that they were never a conquered country at anytime in their history.

Modern day Ulaan Baatar is fairly westernized in its culture, i.e. there are shopping centers, departmental stores, quality hotels (but no hot water), lots of massage parlours, and nightclubs, but strangely, very few restaurants of western standard. The buildings are of Russian architectural design with emphasis on pragmatism rather than aesthetics. The city infrastructure such as roads, electricity, clean water supply and sewerage disposal are poorly maintained and in many sections of the city, in a state of disrepair and dysfunction. The smell of sewer prevades in most parts of the city. Only the main roads are sealed but full of potholes and all other side streets and rural roads are just desert and dirt tracks.

We saw the open man-holes in the middle of the roads, where late at night the street kids go in to sleep in the sewerage pipes below the roads. Early in the morning before dawn, they all crawl out into the streets and huddle in the cold morning in any kind of shelter they could find. They are often seen searching for food scraps in bins around some restaurants.

Our team visited one of the city hospitals in the capital, and I volunteered to give a lecture on nutrition to the medical staff. I have observed that the basic Mongolian diet is fairly monotonous consisting of white bread, lots of butter, yoghurt made from yak milk, and mutton soup …three times a day! They ate very little vegetables (most vegetables are imported from China, since no vegetation grows in the desert) and almost no fruits of any kind. The open-air wet markets are full of imported vegetables and fruits from China, but it is apparent that only the very rich Mongolians can afford to buy them.

Despite their high fat, high protein and low carbohydrate diet, cardiovascular diseases are uncommon among the Mongolians. Their main ailments are skin diseases (possibly due to poor personal hygiene and unhygienic living conditions) and gastrointestinal diseases due to

parasites and gastroenteritis (possibly due to drinking contaminated water, poor food handling and storage).

Next, we flew north-west into a rural town called Muren, situated very near the Russian Siberia border. The plane was an old Russian cargo-plane, propelled by two propellers and we landed on an old Russian military airbase.

There are only two main sealed roads that cross each other in this rural town, and all the other side roads are dirt tracks. Within the small town the Mongolians lived in timber houses demarcated from each other by timber fences. Outside the town where the majority of the people are, the nomadic tribesmen lived in round-shape tents of animal skin called the 'ger'. The landscape is one of undulating desert sand dunes with no vegetation, no trees and no water. There is a central village well where the people pay a small fee for two buckets of well water, their daily ration for drinking, cooking and washing. The most wealthy tribesmen have wells dug in their property and such personal wells are often shared by members of the same clan. There is also hot shower baths, where anyone can get a hot shower for a fairly large fee.

Surprisingly, this rural town has a large 3-storied hospital, with the major departments being the Gastroenterology and Dermatology. I learnt later that this hospital is the Base Medical Centre servicing many small rural towns that are scattered hundreds of miles from each other in the Gobi desert.

I met with the medical director of the hospital and donated many cartons of medical supplies (local anaesthetics, antibiotics, analgesics, stethoscopes, blood pressure machines, electronic ear thermometers and an ECG machine) we had brought with us. These medical supplies were kindly donated by the Australian Chinese Medical Association of Victoria.

The Gillette Company from Australia also donated 500 'Oral-B' toothbrushes for the Mongolian children. These were distributed to the primary schools where they were shown how to brush and care for their teeth. Because the water is so cold, and very few homes have hot water service, many of these rural people hardly brush their teeth, let alone own a toothbrush. Office Works Company from Melbourne donated two cartons of exercise books and colored pencils, which the school children received with great joy.

The Dental Department of the hospital, consisted of 3 upright pedal-pump dental chairs and one old dental drill. There are 3 women dentists working there, all trained in Ukraine. I volunteered to work in the Dental Department of the hospital using the dental supplies that I brought along. The news of free dental treatment by a foreign dentist quickly spread throughout the town and the neighboring villages. Very quickly the corridors leading to the Dental Department filled up with long queues of patients from the villages. Because of the meager supply of existing dental equipment in the hospital, my work was confined to extracting teeth.

The well water in this rural area must have a high fluoride content, as I observed they had mottled and brittle enamel on the teeth of almost every Mongolian born in this area.

Gum diseases and carious teeth that are decayed down to their roots are a common sight. I used up all the 500 cartridges of local anaesthetics that I had brought along, and I collected 4 large biscuit tins of extracted teeth. As I used a pair of new gloves for each patient, the hospital instructed me to drop the used gloves into a special container where they can be collected, washed and reused by the local dentists. Good quality hand gloves are a rarity in this place, so I left behind the remaining cartons of hand gloves I had brought with me.

My first hand experience with skin diseases was at the dental chair, where I could observed at close range widespread skin diseases and head lice. These creepy crawlies just covered every strand of hair. I was very fortunate to have brought a huge supply of disposable gowns.

As I left Mongolia to return to Australia, I could not help but realise what a 'lucky' country Australia is. We have so much but these Mongolians have so little, and yet they are very happy to share their meager food with us.

Kaleidoscope

The duck

Siew-Khin Tang

Mention 'Peking Duck' and you can be assured of full attention in a room. Salivary glands begin to secrete, taste buds and the imagination are stirred up. To understand why we are so spellbound by this unique cuisine, we have to trace its origin and discover why it is held in such high esteem.

Early in the Yuan Dynasty (1279 - 1368),HuSiHiu an inspector of the imperial kitchen compiled the "Complete Recipes For Dishes and Beverages" in 1330. The golden-brown duck, roasted in an oven fired by fruit-tree twigs was so well received, it was ordered to be included in the Imperial Court menu, to perpetuity.

In the 15th Century, the Ming capital was moved from Nanjing to Peking. There the earliest roast duck restaurant was opened in the JiangJing period (1522 - 1566); it was named BianYiFang Restaurant. The roasting process was done by placing the prepared duck in a preheated clay oven. Sorgham stalks were used to heat up the oven and the duck, hung from a hook, was cooked by radiant heat. This resulted in the golden-brown skin with underlying tasty and tender meat. There was an additional secret to attain the crispy skin and this was in the preperation of the duck. After defeathering , a slit was made in the upper neck and air was blown to seperate the skin with underlying fat from the meaty part (photo). It was then dipped in a hot solution containing measured parts of water, honey and spices and hung to air-dry for many hours or even days.

The roast duck gained popularity as a favourite dish of the upper class and was recorded in a famous book written by poet and gourmet YuanMeng titled "Recipes From The SuiYan Garden" during the QuinLong period (1736 - 1796). Scholars, feasting on the delicacy, were inspired to compose poetry, some of which were recorded in the "DuanZhuIuCi Book of Rhymes". Of the many restaurants in the new capital Peking (Beijing), the most famous is the QuanJuDe which opened for business in 1864 during the reign of Qing Emperor TongZhi. The fame of the restaurant spread widely and lasted for many years. It expanded and was rebuilt in 1948, with branches in West Chang'an Boulevard and WaiFuJing Street, being established in the following years 1954 and 1959 respectively.

Photograph from a very old French magazine.

The roast duck dish traditionally consists of slices of meat with its crispy skin wrapped in paper-thin rice flour pancakes, flavoured with bean paste, strips of spring-onion (scallion) and strips of cucumber. The highlight of the event is the witnesssing of the chef with deft hands, slicing the meat into a traditional 120

pieces, each including a correct proportion of meat with attached overlying
crispy skin. Following this, parts of the remaining duck are stripped from the bone and another dish is cooked with preserved mustard leaves or bean-sprout shoots. The bones are then boiled in soup to be served at the end of the meal. It is known that some retaurants are able to conjure up to 20 dishes from all parts of the duck including the wings,webbed feet, tongue,heart,liver, pancreas and other tissues /organs.

In Beijing today, the famous QuanJuDe has many branches. Some are distinguished by their nick-names: “Big Duck” is the older restaurant, “Small Duck” the old BianYiFang restaurant, “Wall Street Duck” at the Great wall, “QuanJuDe Duck” the most recent and largest of the Beijing group (with 41 dining halls that can accomodate 2,000 clients with a capacity to serve 5,000 meals a day by a staff of over 1,000 workers), “Sick Duck”, the restaurant situated close to the Peking Union Medical College Hospital.

Currently in keeping with a clean enviroment and health guidelines, new cooking methods using electricity have resulted in a reduction of smoke and dust. Salvation of fruit trees which were felled to provide the distinctive aroma in the clay oven, has pleased conservationists. Some of the most recently opened QuanJuDe group of restaurants use computer-controlled ovens which they attest produce roast duck as flavoursome as those roasted the traditional way. The ducks are now inflated by hand-operated or electrically controlled air pumps (eg. bicycle pump).

As the Chinese customers become increasingly sophisticated, KFC outlets in China now produce ‘chicken dressed as Peking Duck’ by flavouring their chicken pieces with marinade used in preperation of the famous PekingRoast Duck. Their aim is ‘not to be outdone’ by MacDonalds’ growing market. Even street stalls now cash-in on the traditional cuisine by offering the tasty duck pieces in pancake rolls and the old Beijing QuanJuDe Restaurant that roasted ducks for the Imperial Qing Court now sells microwaveable “duck in a bag”. This novelty has spread overseas and it is not unusual to order Peking duck in retaurants worldwide, from east coast America to the west across Asia, down to Australia and in the northern hemisphere to Europe and the United Kingdom.

It is widely publicised by restaurants that the best ducks they use for this delighful dish are ducks farmed for the sole purpose of roasting and the ducks are force-fed to attain a good layer of subcutaneous fat and tender meat, each weighing no less than 2.5 kilograms.

Ardent home-cooks are able to master the art by following recipes closely. One interesting author from Devon, England, offers a recipe that is easy to follow. Although home-preperation seems time-consuming, the effort is rewarded by knowing that one can achieve the culinary expertise of an ‘imperial chef’!

(Information obtained from Internet sources.)

A. MANDARINE PANCAKES

225 gm Plain flour (2 cups)
250 mls boiling water(1 cup)
2 tablespn Sesame oil

Method : Sift flour into bowl, add boiling water and knead to make a smooth pliable dough.
Leave to rest for 1/2 hour.
To make pancakes, role dough into a long roll, cutting thin slices which are then flattened with a rolling pin to form thin pancakes of 4 to 6 inch diameter.Brush surface with sesame oil and keep aside in pairs.
Heat non-stick frypan or griddle and cook pancakes till lightly translucent. Fold in half and keep aside.
They are steamed for 10 minutes just prior to serving.

B. PEKING ROAST DUCK

2 to 2.5 kilogm (4 1/2 lbs.)duck cleaned and wiped dry.
Inflate via skin slit at neck, using a bicycle pump to seperate skin from meat.

1/2 cup vinegar
1 teaspn ground Szechuan pepper
3 teaspn sea salt
Generous pinch of Five-spice powder

Method: In a pot of boiling water (volume sufficient to emerse duck) add vineger. Plunge duck in boiling water for 5 minutes, then lift and dry duck inside and out with clean,dry dish towel.Rub inside/cavity with mixture of salt,Szechuan pepper and Five-spice powder. Hang duck to dry in light breeze or infront of electric fan for a short while.

C. MARINADE
4 tablespn honey
2 tablespn vinegar
3 tablespn dark Soya sauce
2 tablespn rice wine or sherry
500 mls boiling water

Method: Paint duck with marinade and allow to hang dry, repeating several times, basting and drying over a period of 10 to 12 hours, to allow skin to dry out (become parchment-like).
Pre-heat oven to 160 C / 325 F and roast duck on a rack for 1 1/2 to 2 hours, depending on size of duck.
Baste with marinade from time to time.
Turn heat up in last 10 to 15 minutes, to darken skin to golden brown colour.

D. ACCOMPANIMENTS
6 Spring onion (scallion) stalks
1 cucumber peeled and cut into 4 inch strips/Julian
HoiSin or Plum sauce

Suggestions: For best flavour, brush warm pancake (kept in wicker steam container) with sauce, lay Spring onion and cucunber strips across in middle of pancake,place a slice of roast duck with crispy skin and fold to form a rectangular parcel.

Enjoy!

Boddhisattva of Compassion

Min Li Chong

Introduction

Among the boddhisattvas, Avalokitesvara is the most compassionate saviour, constantly acting in the interest of the ordinary being. Avalokitesvara is a divine being to whom one can pray for aid and consolation. In the ninth century, Fa Hsien, the Chinese monk on his return from India to China called on Avalokitesvara to save him from shipwreck[1]. Avalokistesvara has provided some of the most beautiful monuments and sculptures in the world of religious art. Examples of this can be found at the Bayon Temple and The Gates of Angkor Thom in Angkor, Cambodia and at Borobudur, Indonesia. The Boddhisattva of Compassion has many names: Kuan Yin in China, Kannon or Kanzeon in Japan, Quan Am in Vietnam, Kwanseum in Korea, and Chenrenzig in Tibet.

Origin

Avalokitesvara appears in the Pure Land sutras and also in the Lotus Sutra[2]. In the Heart Sutra, Avalokitesvara looks down on the world from on high, equipped with many powers and abilities [2]. Legend states that he was born from a ray of light emanating from the right eye of Amitabha [3]. He is also known as Lokesvara, "Lord of the World" and Lokanatha, "Protector of the World". Avalokitesvara has been depicted as female, male or androgynous. He is mainly depicted as male but in China, Japan and Vietnam, the boddhisattva is depicted as a female. As a whole, in Buddhism it is believed that all Buddhas and boddhisattvas are asexual and appear in various forms in different circumstances [4]. All the various forms are representations of compassion; they express the gentleness, responsiveness, empathy and helpful qualities of compassion.

In China, Avalokitesvara is known as Kuanshiyin. This was later shortened to Kuan Yin during the Tang Dynasty. Kuan Yin means "she who hearkens to the cries of the world", it is a translation of the Sanskrit name, Avalokitesvara [3]. Another common translation of the name is "Regarder of the Cries of the World" and "Perceiver of Sounds".

Kuan Yin is also associated with the legend of Princess Miaoshan [3, 5]. It is a story that I was told as a child but there are various versions of the legend. Princess Miaoshan was the third daughter of Prince Zhuang of Chu in the Spring and Autumn Period (722 – 481 BC) [4]. Princess Miaoshan was born on the nineteenth day of the second month. She was a very pious lady. When she refused to accept marriage against her father's wishes, she was imprisoned to do hard labour in a nunnery. When she continued to refuse his bidding, the nunnery was burnt down but she survived. Subsequently, she was sentenced to death by strangulation. The sentenced was carried out and her copse was carried to the underworld by a mountain deity. There she was resurrected to the land of living where she lived for nine years. By then, due to his evil deeds, Prince Zhuang suffered a terrible illness. A monk foretold that he could only be cured if a medicine that is made from the eyes and hands of one that has no hatred. The servants were directed to seek the great immortal. When they arrived, the Princess cut off her arms and gorged her eyes to be made to medicinal pills. Prince Zhuang was cured and went to offer his thanks to his saviour. On arrival, he recognised that his saviour was none other than his daughter. Prince Zhuang was so moved that he repented and converted to Buddhism. He made a wish that Princess Miaoshan be restored to the condition of 'fully eyed and fully armed'. It was then that she announced that she was really the boddhisattva, Kuan Yin. Another version to the ending was that to commemorate Miaoshan's deeds and atonement of his sins, the Prince recruited all the master craftsmen to make a statue of Kuan Yin with '*quan yan quan shou*', meaning intact eyes and hands. The craftsmen misheard it for '*qian yan*

qian shou', meaning thousand eyes and hands hence many statues of Kuan Yin have been depicted with a thousand eyes and hands.

Forms of Kuan Yin

The statues of the boddhisattva are in many forms. According to Buddhist scriptures, there are thirty-two forms of Kuan Yin [6]. The usual form, the White Robed Kuan Yin is human in appearance, wearing a white brocade robe, her hair in a bun covered by a hood, a willow wand in her right hand and a vase in her left hand. There is usually an effigy of Amitabha on the headdress. Her principle symbols are a precious vase held in one hand and a willow spray held in the other. The vase contains the sacred fluid, which symbolises the nectar of wisdom and compassion, and immortality. The willow spray is the symbol of Buddhist virtue [7] , the 'weeping willow' represents compassion for the sorrows and suffering of the world. The willow is also an ancient Chinese symbol of femininity. Kuan Yin is normally depicted standing on a lotus flower, with waves swirling at the base of the lotus flower.

Two attendants flank some forms of Kuan Yin. They are Lung Nu, the Dragon Maiden, holding a giant pearl and a smiling boy, Shan Ts'ai. Statues of Kuan Yin are also frequently shown holding a child, or a group of children playing around her. She is known as Bestower of Children, granting children to those who desire them. The figure of holding a single child is sometimes referred to as the Chinese Madonna and Child. Some early Christian missionaries to China mistook her as the Virgin Mary [6], and they believed they had uncovered a native form of Chinese Christianity.

Another form is the Eleven-headed Avalokitesvara, with ten heads like a crown on top of an ordinary head. They represent the various characteristics of the boddhisattva's ability and his panoramic awareness to see who are suffering in the world below. Another story described how the bodhisattva saved all the many sufferers from cycle of birth and death and on looking back, despaired that all the spaces in samsara had been filled again with new beings. Her head was split apart in grief. After this happened ten times, Amitabha provided a new head. Another version is that Avalokitesvara's head split into ten pieces simultaneously, each was restored by Amitabha, adding his own head on Avalokitesvara. The Thousand-Arm Avalokitesvara is another common form depicted. In reality, he is more commonly represented with forty-two arms [3], which are arranged in a fan around the body. The upper hands are in prayer, one pair holds a begging bowl and the other hands, each holds a symbol or are in a mudra. At times, each hand has an eye on the palm to signify panoramic awareness of the boddhisattva.

Conclusion

Avalokitesvara is the most popular Buddhist deity. He is a boddhisattva who appears in various forms to assist others in their time of need. The deity expresses the compassion of all the Buddhas and represents the union of emptiness and compassion. The various forms of Avalokitesvara in different countries have developed to suit their individual temperament, cultural and spiritual requirements.

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S K Tang
(my friends call me ' Happy')

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