# The Singapore Family Physician


The College of General Practitioners Singapore
Vol. VII
No. 2
APRIL/JUNE 1981

ISSN 0377-5305

Even with modest elevations of blood pressure...

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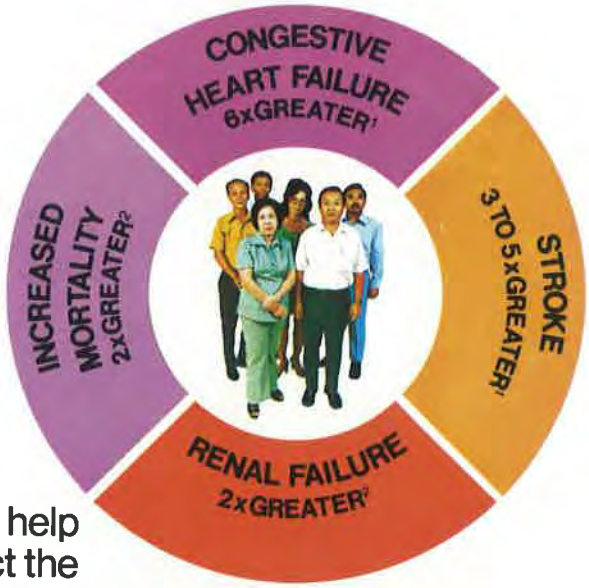


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**REFERENCES:**
1. The Framingham Study,cited by Committee on Hypertension: Drug treatment of ambulatory patients with hypertension, J. Amer. Med. Ass. 225:1647-1653, Sept.24 1973.
2. Stamler, J.: Comprehensive treatment of essential hypertensive disease—why, when, how, Monographs on Hypertension, No. 13, October 1970, Merck Sharp & Dohme, Rahway, N.J.

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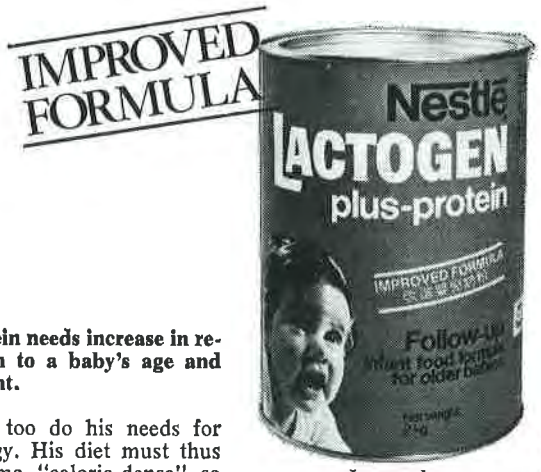


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**Protein needs increase in relation to a baby's age and weight.**

So too do his needs for energy. His diet must thus become "calorie-dense" so that in satisfying his hunger his nutritional needs are satisfied too. If the milk supply becomes limited, then it is essential that the remaining milk supply compensate in protein, the protein that may be lacking in the traditional pap.

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*"Present day practice in infant feeding" Dept. of Health and Social Security, U.K. 1974*

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Vol. VII, No. 2 April/June 1981 Price to Non-Members $5 MC (P) 78/3/81

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# OBITUARY

**Dr. Benjamin Henry Sheares**
**President, Singapore.**

Dr. Benjamin Henry Sheares was born on August 12, 1907. He was elected President of the Republic of Singapore on January 2, 1971. He received his early education at the Methodist Girls' School (then a co-educational school), and later at St. Andrew's School and Raffles Institution.

He joined the King Edward VII College of Medicine in 1923, and qualified with the degree of L.M.S. in March 1929. He had a distinguished academic career and was awarded the Queen's Fellowship in 1940, but could not proceed to Britain owing to the outbreak of World War II.

During the Japanese occupation of Singapore, he was Head of the Department of Obstetrics and Gynaecology at the Kandang Kerbau Hospital. He excelled in this field and became the first Singapore born doctor to be appointed acting Professor of Obstetrics and Gynaecology at the King Edward VII College of Medicine at the end of the war.

He held the post of Professor of Obstetrics and Gynaecology at the University of Malaya in Singapore from January 1950 to June 1960 when he retired and went into private practice. Those of us who were fortunate enough to have been his students during this period will remember him as a kindly man with a quiet sense of humour. He was a diligent worker and expected the same high standard of excellence from those who worked with him at the hospital. Despite the stress in his working life in the hospital he was never known to raise his voice, or lose his temper on any occasion.

He was very much respected for his academic work and was made an Honorary Fellow of the Royal Society of Medicine in 1975, and an Honorary Fellow of the Royal College of Obstetricians and Gynaecologists in 1976.

Despite his arduous tasks as President of the Republic of Singapore, he was still able to find time to be the first Patron of the College of General Practitioners Singapore, and graciously gave his patronage to the College as from 1 July 1974. He had a tremendous wealth of knowledge and his keenness on all matters made him someone whose opinion and judgement was always highly respected.

His high sense of duty should be a lesson to us all. Despite failing health in his latter years, he continued to serve the nation and the people of Singapore.

His departure from our world will be sadly missed by all who have come to know and respect him. It would be difficult to find someone who is so versatile, yet so humble and devoted to his work.

E K

# Editorial
# Sounds, Words & Language

The greatest gift received by mankind is the gift of language. It is this which sets him apart from other animals. The manner in which language is acquired depends on both hereditary as well as environmental factors.

**Birth Cry**

At birth, the stimulus of contact with air from a preceding warm and fluid environment in the mother's womb is responsible for the baby's first uttered sound. This sound is a purely physiological phenomenon. It triggers the respiratory process enabling the filling of the lung alveoli with air thus permitting oxygen to be made available to the red blood cells in the blood stream.

**Prelinguistic Sounds**

Subsequent sounds or vocalizations of the baby are unlearned. They are vowel sounds universal to all children of whatever language groups. Thus, Chinese, Indian or Malay babies make similar vowel sounds which are indistinguishable. In the repertoire of prelinguistic sounds which every normal child is capable of producing lie the linguistic fundamentals of the language he is exposed to and which he will subsequently learn to use. Certain sounds depending on his linguistic environment become dominant. Sounds which a particular language does not have are therefore not reinforced by usage. In time they disappear altogether. These prelinguistic sounds however have not attained symbolic value.

**Imitative Sounds**

At four to five months, a normal child begins to prattle. Syllable-like sounds are uttered and often repeated. Prattle depends of course on the integrity of the organs of hearing which are capable of registering sounds at birth. It is a fact that deaf children do not prattle. The stimulation of linguistic sounds from the environment is of the greatest significance in the prattle stage. Syllabic prattle provides the practice needed in the facility of speech.

The imitative sounds of the infant have nothing in common with what he seems to be attempting to say. He is physiologically and anatomically immature. The tongue fills the whole mouth cavity and its movements are confined to protusion and withdrawal — movements geared only for sucking and swallowing. An imitative sound becomes a word only when it has acquired the same meaning to both speaker and hearer alike i.e. a symbolic value.

**Child's First Word**

Great individual variation occurs at the age in which a child utters its first word. This is not to be confused with the utterance of the first sound. Terman found among his subjects (people with I.Q. of 140 and above) that the first word was uttered at an average age of 11 months. However, there were those who did not utter their first word until they were about 3 years of age. Just as a journey of a 1,000 miles begins with the first step, the acquisition of a language starts with the first word.

**The Ape and the Child**

In their book "The Ape and the Child", W.N. and L.A. Kellog described the bringing up of a female chimpanzee together with their son as though they were sister and brother. Although initially the chimpanzee excelled the child in a whole variety of physical skills it never was able to develop even the rudiments of language behaviour.

K.J. and C. Hayes attempted to teach chimpanzees to speak without much success. After three years of upbringing which was similar to that given to a young child, it was found that the chimpanzee was only able to use a few isolated words such as "mama" and "cup" appropriately. There was a definite limit to its linguistic achievement. Its central nervous system is not evolved for language acquisition notwithstanding the presence of the peripheral apparati of speech.

**Children in Institutions**

Children brought up in institutions have distinctly fewer linguistic sounds than their counterparts who are brought up by their parents in the more stimulating environment of their own homes. Such children suffer the disadvantage of a poor linguistic environment. Their use of language is subsequently considerably delayed.

**Twins**

Twins are said to be linguistically less competent than single children. They are believed to be more often left to themselves than single children. Because of this they receive far less adult linguistic stimulation than single children. Consequently, they are less linguistically competent than single children.

**The Only Child**

The only child has better adult linguistic stimulation than would be the case if there were more children in the family. Such children are found to be more forward in language competence.

**Rich & Restricted Linguistic Environment**

Children from different social and economic level differ relatively little from one another linguistically during the early years of life. The effects of an environment which is poor linguistically do not appear until much later. In a linguistically rich environment children appear to have better command of syntax and accidence and they have also the ability to construct more complex sentences much earlier.

E. Milner in 1951 used the California Test of Mental Maturity on children in the first grade of elementary school. This test gives a good idea of the linguistic level in children. A group with very high scores was compared with another with very low scores. Very distinct differences were found in the child-parental relationship. Children with very high scores have on the average better child-parental relationship. They have breakfast and other meals together with their parents and also take part in the conversation. Children with very low scores take breakfast alone. At other meals they shy away from the conversation.

Basil Bernstein, a worker in linguistics at the University of London noted that children from the poorer homes often showed large intrapersonal differences in the scores they obtained in different I.Q. tests. There was as much as a twenty-point difference with I. Q. tests having a high percentage of verbal material against I. Q. tests with non-verbal material. His studies also revealed that there were social differences in the use of language between those who came from poorer homes and those from middle-class homes. In poorer homes, language was used primarily to increase social cohesiveness of the family by references to common interests. Questioning of adults was discouraged because this was regarded as a challenge to authority. In middle-class homes, language was used to individualize thinking and questions as well as speculation were encouraged. The result was that children in middle-class homes were constantly challenged in the use of language. More complex sentences had to be used and these required some sort of advanced planning.

The above studies indicate that attitudes of parents and family habits are extremely important for a child's linguistic development. The stress laid on environmental factors must not be construed to mean that hereditary factors are unimportant. We can do something about the environment but we are prisoners of our genes.

**Correlation**

In Singapore there is much harping on the better performance of children ( in all school subjects) from homes in which Mandarin or English is spoken against homes in which only dialect is used. The correlation however is not a cause and effect relationship as has been implied. A common factor in homes in which Mandarin or English is spoken can be identified. This common factor or the crucial point in the correlation is the richness of the language environment provided by parents who are either Mandarin or English speaking. It is the type of environment which Basil Bernstein has found in his middle-class homes. It is a language environment with challenge in usage and this challenge is reinforced in schools as well as in society. Dialect speakers are at a decided disadvantage in the context of Singapore's educational environment. Chinese is taught in Mandarin and all other subjects in English. Dialect speakers although not necessarily all coming from the lower socio-economic strata of society perhaps provide a more restricted linguistic environment devoid of challenge and encouragement in usage. Dialect speaking is certainly not reinforced in schools.

Children from dialect speaking homes, through no fault of their own, compete on unequal terms with children whose parents are either Mandarin or English speaking. Recognition demands action. We can manipulate the environment like Mencius' wise mother for their betterment. This calls for provision of much better language teaching and immersion (both Mandarin and English) for these children to compensate them for the lack of requisite language stimulation at home. Unless this is done soon the disparity in performance becomes greater with each ascending grade in school.

**Language and Thought**

Thought is said to be impossible without language. Lucidity and keenness of thought are intimately connected with logical construction of sentences. Does language open up the doors of the intellect? Do the different languages serve equally well in the different dimensions of man's knowledge e.g. in science or philosophy? Is there a decided advantage attached to a particular language in the exploration of further knowledge? Is the backwardness of a people the direct result of the limitations of their language? These are some important questions worthy of rumination.

L.V.C.

# Family medicine around the World — South-East Asia and Australia

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B. Ec.

## Introduction

The purpose of this paper is to review the development of primary care in the countries of South-East Asia and Australasia. What follows is based on a questionnaire circulated to certain countries in the region during the early part of 1980. The questionnaire was designed to provide information related to primary care manpower, the delivery of primary care, the organisation of general practice in the region, the availability of training for general practice and the organisation of continuing medical education. An example of the questionnaire is shown in Appendix I.

The questionnaire, together with an explanatory letter was sent to the following countries: Australia — Hong Kong — Indonesia — Malaysia — New Zealand — Papua New Guinea — the Philippines and Singapore. The questionnaire was followed by a reminder letter four weeks after the initial circulation if no reply had been received. At the time of writing replies had been received from seven of the eight countries circulated, and we are grateful to those who were able to provide us with information.

Where possible the questionnaire was sent to a primary care college or academy, but where this was not possible it was sent either to the Medical Association in the country or to an appropriate medical authority such as the pre-eminent medical school in that country.

We recognise that the questionnaire is based on a 'western view' of what is appropriate in the field of primary care. We see this as being a weakness in our survey, and in presenting the data, acknowledge the bias that this will have created in the data. We are keenly aware that the most appropriate kind of primary care in many of the countries surveyed may not be an extension of western style medicine. We hope that discussion from the floor will clarify this anticipated weakness in our presentation, together with any others that might be of concern to participating member nations.

## What and Where is South-East Asia and Australasia?

The region of South-East Asia and Australasia includes the following countries:

| | |
|---|---|
| Australia | New Zealand |
| Burma | Papua New Guinea |
| Hong Kong | The Philippines |
| Indonesia | Singapore |
| Kampuchea | Thailand |
| Laos | Vietnam |
| Malaysia | |

The population of this region totals 368.7 million people and is rapidly expanding. The distribution of population amongst the countries surveyed is as follows:

| | |
|---|---|
| Australia | 14.2 million |
| Hong Kong | 4.9 million |
| Indonesia | 143.9 million |
| Malaysia | 12.5 million |
| New Zealand | 3.1 million |
| Papua New Guinea | 3.0 million |
| The Philippines | 46.3 million |
| Singapore | 2.3 million |
| | 230.2 million |

The residual 138.5 million people is distributed amongst those other countries listed within the region.

The population density is generally high being 4010 people per sq. km. in Singapore, 150 people per sq. km. in the Philippines, and 70 people per sq. km. in Indonesia. This is to be contrasted with the figure of 1.85 persons per sq. km. in Australia and 23.16 people per sq. km. in the United States of America.

1. Director of Research, Royal Australian College of General Practitioners, Family Medicine Programme.
2. Margaret Renou — Research Officer, Royal Australian College of General Practitioners, Family Medicine Programme.

### The Delivery of Primary Health Care

Here we see a very diverse situation when studying the region as a whole. At one extreme there is Indonesia where most of the primary health care is delivered by traditional healers known as 'Dukuns' and about 90% of the population never see a medical practitioner during their life-time. At the other extreme there is Australia and New Zealand where there is one GP for every 1500-1700 people and where people average 4.5 visits per capita per annum to the general practitioner.

The delivery of primary care in many of the countries surveyed is still affected to some degree by folk lore. In Indonesia, as already indicated, most of the primary health care is delivered by traditional healers. In the Philippines there are herbalists and other non-medical practitioners administering health care, whilst in Hong Kong many Chinese people prefer to see a Chinese 'bone-setter' rather than a general practitioner or orthopaedic surgeon for traumatic injuries of the limbs.

From the information that we have, it appears that in the main, general practitioners are in private practice rather than in salaried service, the exception being Papua New Guinea, where most primary care physicians are salaried government practitioners.

A further point of contrast within the region is that general practitioners in private practice in the less well-developed countries seem to be largely in solo practice, whereas in Australia and New Zealand 40-50% of primary care physicians are in group practice.

### General Practitioner Manpower

The absolute general practitioner workforce varies greatly between countries. Indonesia and Australia have the highest totals of general practitioners with around 9,500 each. However a better means of visualising the availability of general practitioners is to consider this absolute number in relation to the total population to be served. This GP/population ratio is presented in Table 1. This shows that the ratio ranges between 1:1500 and 1:20,000.

In all countries there is considered to be a maldistribution of primary care physicians, and this circumstance accentuates the limited availability of primary care physicians, particularly in countries such as Papua New Guinea, the Philippines and Indonesia.

A further significant difference emerges when one examines the proportion of medical manpower in a country which is considered to be primarily concerned with general practice. This is once again illustrated in Table 1, where general practitioners make up 40% of the total medical workforce in New Zealand and 80-85% of the same workforce in the Philippines and Indonesia. it would thus seem that there is much more emphasis on specialised medicine in the more developed countries such as New Zealand and Australia, and this may explain the small but restricted trend towards delineation of privileges in these countries.

Another point of contrast between the less developed and more developed countries is the fact that there is often not an expectation within

**TABLE 1**
**GENERAL PRACTITIONER MANPOWER IN SELECTED COUNTRIES IN SOUTH-EAST ASIA – AUSTRALASIA**

| Country | No. of GPs (approx) | GP/Population Ratio (approx) | GPs as a proportion of total medical workforce (approx) |
|---|---|---|---|
| Indonesia | 9450 | 1:15,000 | 85% |
| Hong Kong | ? | 1: 1,520 | ? |
| Philippines | ? | 1: 3,000 | 80% |
| Singapore | 800 | 1: 3,000 | 44% |
| Papua New Guinea | 150 | 1:20,000 | 60% |
| Australia | 9500 | 1: 1,500 | 40% |
| New Zealand | 1700 | 1: 1,750 | 40% |

the community that its ills will be cared for by a primary care physician. Thus whilst a poor GP/population ratio in Australia and New Zealand would almost certainly mean that the delivery of health care expected by the population in those countries would be inadequate, this would not necessarily be the case in other countries within the region, where 'primary health care' is often delivered appropriately from the community's point of view by traditional healers.

All the countries who replied to the survey have active medical schools producing a variable number of graduates as demonstrated by Table 2. As in the case of the number of general practitioners available to the community, the absolute numbers being produced in the member countries were often similar. However when the annual number of graduates is compared with the total population in any country, a radically different picture emerges, with Indonesia producing one new graduate per annum for each 130,000 people and Australia producing one new graduate for each 10,500 people. One could question which is the most appropriate ratio. Is Australia producing too many doctors or Indonesia too few?

A further point of interest to come from the survey was the fact that with the exception of Australia and New Zealand, the countries surveyed reported very few foreign trained medical graduates as being members of their general practitioner workforce. This was a surprise to us as the general practitioner workforce in both Australia and New Zealand is made up of between 20 and 30% of graduates trained in other countries.

**Health Expenditure**

The information that we were able to obtain about the extent of spending on health care in the countries surveyed was very sketchy. The most reliable data were based on Government expenditures, but even in this instance we were not sure that we had obtained the total annual amount expended on health care, as not all funds expended on health care are necessarily listed under 'health' in any country's budget.

As in the case of general practitioner manpower and annual numbers of graduates, we found it most useful to consider health expenditure in terms of the amount expended in any given country per head of population. In both Singapore and Hong Kong, health expenditure was between A$35-40 per head of population, whilst in Australia the expenditure is A$300 per annum per capita.

Again, one is forced to ask: 'Which is the most appropriate figure?', for if the Australian per capita figure were applied to Indonesia, then the annual health budget for Indonesia would be A$44,964,800,000![2] This is 13 billion dollars more than the entire annual Federal Budget in Australia.[3]

Some of the government expenditure noted often takes the form of a government contribution toward the cost of an individual visit to a primary care physician. However, apart from Australia

1. Data received after writing indicates that 75% of Malaysia's general practitioners are foreign trained.
2. A$1.00 = US$1.16 = £0.49.
3. Annual budget of U.S. Department of Health and Human Relations approximately A$200 million.

**TABLE 2**
**MEDICAL SCHOOLS IN SELECTED COUNTRIES IN SE-ASIA – AUSTRALASIA SHOWING THEIR ANNUAL GRADUATION OUPUT (AS AT MID-1980)**

| Country | No. of Medical Schools | Annual Graduation Output | '1000' People per New Medical Graduate |
|---|---|---|---|
| Indonesia | 25 | 1100 | 130.1 |
| Philippines | 18 | 1200 | 38.6 |
| Hong Kong | 1 | 150 | 32.7 |
| Singapore | 1 | 120 | 19.2 |
| Papua New Guinea | 1 | 20 | 150.0 |
| Australia | 8 | 1350 | 10.5 |
| New Zealand | 2 | 175 | 17.7 |

and New Zealand we believe that in this region of the world, the patient generally carries the responsibility of payment. The availability of health insurance is very restricted by North American or European standards, and in many instances, 'payment in kind' for example, with chicken or rice, is still an acceptable practice.

It is impossible to assess the actual cost of a visit to a primary care physician relative to the wealth of people in any individual country. The amount of payment ranges from about A$14.00 in Hong Kong to 'payment in kind' in Indonesia, whilst a short visit to a general practitioner in Australia costs around A$10.00.

**The Organisation of General Practice**

By North American and European standards general practice is not highly organised in the region, with the possible exception of New Zealand and Australia. However, a structure is rapidly emerging in most countries and the Philippines, Hong Kong, Singapore, New Zealand and Australia all have Colleges or Academies of General Practice.

Membership of these academic bodies varies between 35% and 60% of all general practitioners in a given country. As Table 3 demonstrates, the Philippines and Australia have the largest total number of general practitioners concerned with their respective organisations, with approximately 3000 members in each instance. However, despite its large membership, the RACGP lags behind other member countries in terms of representativeness.

The purpose of these organisations seems to be largely educational, both at the undergraduate and postgraduate levels. They share similar aims and aspirations, having the overriding objective of maintaining appropriate standards in the delivery of primary care.

All of these Colleges/Academies offer an examination for General Practice except the Hong Kong College of General Practitioners which is in the process of organising one. In Singapore and New Zealand, it is an examination for Membership, whilst in the Philippines and Australia it is an examination for Fellowship.

The number of Fellowships/Memberships which

**TABLE 3**
**COLLEGES/ACADEMIES OF GENERAL PRACTICE IN SOUTH-EAST ASIA – AUSTRALASIA**

| Name of College/ Academy | Membership | | % of total GP population who are members |
|---|---|---|---|
| | Total | % of total who are GPs | |
| The College of General Practitioners Singapore | 325 | 98% | Approx. 45% |
| Hong Kong College of General Practitoners | 311 | all GPs | ? |
| The Philippine Academy of Family Physicians | 3000 | all GPs | Approx. 60% |
| The Royal New Zealand College of General Practitioners | 677 | Nearly all GPs | Approx. 42% |
| The Royal Australian College of General Practitioners | 3304 | Nearly all GPs | 35% |

have been awarded is small when compared with the total number of general practitioners in each country. New Zealand is perhaps an exception where 450 (26%) of their 1700 general practitioners have been awarded Membership.

### Training for General Practice

There is some training for general practice at the undergraduate level in all the countries who have replied to our survey. For some, countries, for example Indonesia and the Philippines, this training involves spending time in their Rural Health Centres and in others it involves lectures as well as some time in general practice.

Postgraduate training for general practice is a relatively recent development within the region and is currently only available in the Philippines, Australia and New Zealand.

In the Philippines there is a Residency training programme in hospitals accredited by the Academy, which runs for two to three years. In New Zealand there is a one-year training programme of hospital attachments which includes working in accredited training practices. [4] In Australia there is a four-year training programme which includes training in hospitals as well as extensive periods of time being spent in accredited family practices. **In all cases,** the training programme is ***optional,*** for those practitioners wishing to enter general practice, and is ***not linked*** to any obligatory examination.

The Hong Kong College of General Practitioners is planning a post-graduate training programme for general practice in association with the Post-Medical Studies Department of the Hong Kong University, which they hope will be of five years duration. This is due to commence in the near future.

All countries with Colleges or Academies offer continuing medical education, and in those countries where there is no such Academy or College, continuing medical education is still available to a limited degree. It is our impression that continuing medical education is not highly organised. It is certainly not linked in a practical way, or philosophically, to the idea of recertification. This is to be contrasted with the situation in Europe and North America where continuing education is clearly linked, at least at a philosophical level, with the continued right to practice.

4. The programme in New Zealand commences after two years of hospital residency.

### Conclusions

In reviewing the data we believe the following are reasonable conclusions.

When judged by the standards of Western medicine, primary care is more highly developed in those South-East Asian and Australasian countries having a western-type of culture.

Government expenditure on health care is comparatively low in most countries within the region.

There is a serious shortage of primary care manpower in most countries in the region. This shortage will continue for the forseeable future.

There is a serious maldistribution of primary care physicians in the large majority of countries surveyed.

Primary care is often delivered by practitioners who are not trained in the western tradition of medicine.

In the main, most primary care physicians in the countries surveyed graduate from medical schools in those countries. The exceptions to this are Australia and New Zealand where a substantial proportion of primary care manpower is made up of graduates trained in other countries.

Most primary care physicians are not in the employ of governments.

The cost of care is borne by both the private individual and the government to varying degrees. The cost of a visit to a primary care physician is often determined by what the patient can afford to pay.

In general, primary care is not highly organised in a political or academic sense, but a structure is rapidly emerging in most countries.

There is comparatively little vocational training for primary care, the most advanced countries in the endeavour being the Philippines, New Zealand and Australia.

Most countries have Colleges or Academies of Primary Care, with very similar aims.

In most countries there is some emphasis on primary care in the undergraduate syllabus of medical schools.

There is very little legislative control of primary care in most countries. Delineation of privileges and recertification are currently not issues in any of the countries surveyed, and vocational registration is similarly not a practical issue in any country, though it is of philosophical concern in Australia and New Zealand.

Continuing education is not highly organised by European or North American standards.

Finally we would like to thank once again all those countries who were kind enough to respond to our questionnaire.

**APPENDIX 1**

## Questionnaire on the "State of the Art" of general Practice Family Medicine

### 1. GENERAL

#### 1. 1 Background details about health

. 1 What is the current population of
. . . . . .

.2 What is the current birthrate in
. . . . . .

.3 What is the current death rate in
. . . . . .

.4 What are the most common causes of death?

.5 Do you have any folk lore affecting general practice?

#### 1.2 Medical Man power.

.1 Could you please complete the following table, giving the information required about your medical schools?

| NUMBER OF MEDICAL SCHOOLS | DATES ESTABLISHED | TOTAL NO. OF GRADUATES PER ANNUM? | PROPORTION OF GRADUATE OUTPUT THAT IS FEMALE? |
|---|---|---|---|
| Eg. 2 | Whittle Univ. Med. School: 1970 | Whittle – 100 | 30% |
| | Montague Univ. Med. School: 1965 | Montague – 100 | 30% |

.2 How many general practitioners are currently practising in your country?

.3 What is your current gp/population ratio?

.4 Are general practitioners distributed appropriately throughout your community or is there an uneven distribution in relation to population? (explain briefly)

.5 What proportion of the total medical workforce general practitioners?

.6 Is this proportion increasing, decreasing or remaining static?

.7 How many of your resident general practitioners are trained outside your country?

#### 1.3 System of health care.

.1 What is your total annual health budget? (detail National/Federal or State/Provincial, if appropriate)

.2 What proportion of Gross National Product (GNP) is 1.3.1?.

.3 How is the majority of primary care delivered in your country? (Please tick the appropriate answer)

☐ Private practitioner
☐ Government health service (salaried doctors as in Britain).
☐ Both.

.4 How is private primary care funded in your country i.e. Who pays for the consultations? Please tick all the appropriate answers).

☐ Patient pays all.
☐ Combination of patient and government contribution
☐ other (please explain)

Is health insurance available?

.5 What is the fee per GP consultation?

.6 How is the consultation fee determined? (eg. by time spent, a single standard fee etc..)

.7 What is the average annual income for g.p.s?

## 2. GENERAL PRACTICE SPECIFICALLY.

2.1 **Colleges or associations representing general practice.** In this section we are trying to determine who speaks for general practice in your country. We are aware that not all countries have Colleges or Academies of Family/General Practice. Thus it is possible for general practice ot be represented by an organization such as a "Medical Association", of which general practitioners are only a proportion of the membership.

.1 Is there a College/association (s) for general practice in your country?

YES ☐ NO ☐

.2 If yes, what is its name and when was it established?

.3 What are the aims of this College/association (s)?

.4 Could you please complete the following information about your College/association(s)?

| NAME OF COLLEGE/ASSOCIATION | MEMBERSHIP | | % OF TOTAL G.P. POPULATION WHO ARE MEMBERS. |
|---|---|---|---|
| | TOTAL | % OF TOTAL WHO ARE GP.S | |
| | | | |

.5 Is there a fellowship examination associated with your College?

YES ☐ NO ☐

.6 If so: When was it initiated? . . . . . .
How many fellowships have been awarded?
. . . . . .

2.2 **Patterns of Practice.**

.1 How would you define the current role of the general practitioner in your country? For example, are traditional roles being taken over by specialists? Are new roles emerging for the general practitioner?

.2 What is the relationship between general practitioners and other specialists eg. Are other specialists supportive of GP's? Is there competition for patients?

.3 What percentage of your general practioners are practising privately and what proportion are in a salaried practice?

Private . . . Within Private — Solo . . .
— Group . .
Salaried . . . . . .
Has this changed significantly during the past few years?

.4 In some countries doctors (all kinds) can only practice in certain skill areas eg. hospital treatment of bilateral basal pneumonia, if they are accredited by a board or committee to practise that skill. This is often called **delineation of privileges.** It generally applies to hospital practice.
Does delineation of privileges exist in your country? (explain briefly)

2.3 **Training for General Practice.**

2.3.1 **Undergraduate.**

.1 Is there any training in/exposure to general practice at this level?

.2 If so what training is provided and how long has it been available?

2.3.2 **Postgraduate.**
**Vocational Training**

.1 Is vocational training for general practice available? (please tick appropriate box).

YES ☐ NO ☐

.2 If yes — Who runs it? . . . . . .
— Who funds it? . . . . . .
— When was it established? . . . . . .
. . . . . .

.3 Is vocational training compulsory for all practitioners wanting to enter general practice? (Please tick appropriate box).

YES ☐ NO ☐

.4 If not, what proportion of new graduates entering general practice are vocationally trained?

.5 How many practitioners enrol in the training programme each year?

.6 Are there any entry requirements?

.7 What are the aims of the Programme?

.8 Do you have a syllabus for training?

YES ☐ NO ☐

.9 If yes, what does it include? (brief explaination only)

.10 How long is the training programme?

.11 Is there any formal assessment either during the programme or at the end?

.12 How many doctors have "graduated" from your programme to date?

.13 If there is undergraduate training for general practice, is this integrated in any purposeful way with the post-graduate vocational training?

YES ☐ NO ☐

If "yes" please explain briefly

**Continuing Medical Education**

.14 Is this available?

YES ☐ NO ☐

.15 If yes, in what form and who runs it?

.16 Is there any form of Peer Review?

2.4 **Vocational Registration**

.1 Does this exist for general practice?

YES ☐ NO ☐

.2 If yes:
When was it introduced?

What are the criteria for registration?

.3 Is there any requirement for recertification as part of vocational registration?

# The Biology of aging

Dr Peter H C Lim, MB.BS, MMED(SURG),
Choo-Hwee Tan (Miss)*

## INTRODUCTION:

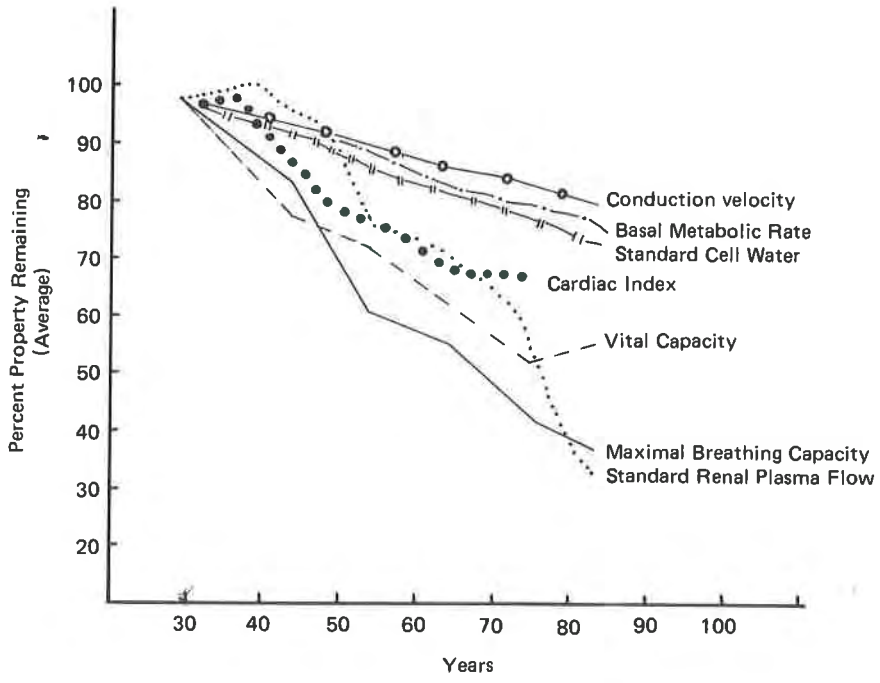
The development of Geriatric Medicine in Singapore can be considered to be slow especially when the aging population is growing ever larger today. Recent public interest in our senior citizens has largely involved laymen and few Health Care Professionals while the medical community remain blind to the rapidly developing science of geriontology.

This communication seeks to illustrate the scientific basis of this speciality which will become increasingly important in Singapore.

## PATHOPHYSIOLOGY

Aging, or senescence more specifically, is better described as that part of the total aging process which occurs during the last trimester of adult existence and during which time related structural and functional changes of a degradative nature prodominate in certain organs and tissues such as to lead ultimately to the diminished capacity of the individual to survive the assaults of both the internal and external environment. The key words in this definition are **'degradation'** and **'diminished capacity'.** From this it follows that aging expresses

**FIGURE I**




**Decline in Various Physiologic Measurements with age in the Human**

(From: B.L. Strehler, Quarterly Review of Biology, 34,120,1959)

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the inability to replenish and repair dying cells as rapidly as they become non-functional as well as the decrease in the number of nonreplaceable cell types.

A wide variety of physiological functions show an apparent linear decrement of functional performance between the ages of 30 and 90 years (The average decrement depends upon the function tested). In some organs, such as muscle, kidney and nervous system, there is histological evidence for a loss of functioning cells which explains, in part, the reduction in functional performance. **Figure 1** shows the linear relationship between age and functioning capacity as charted by B L Strehler. We can see that muscular strengh and speed of motion are significantly reduced in the aged. Simple and complex reaction times become progressively longer with advancing age. Many other organ systems also show varying degrees of functional impairment. Among the endocrine glands, the gonads show a gradually diminishing output of their endocrine secretions. The urinary excretion of steroid hormones diminishes and the response of the adrenal gland to physiological stimulation is reduced.

Although the basal oxygen consumption diminishes with age when calculated in terms of body surface area, it cannot be inferred that the basal oxygen uptake of individual cells of the body is reduced in old age. In fact, when estimates of intracellular water content is used as an index of the amount of functioning tissue present in the individual there was no evidence for an agewise drop in basal metabolism.

However, not all loss in functional capacity can be ascribed to the death and dropping out of cells. Age cannot be explained in terms of one or several isolated organisms. R W Gerard divides the system into a hierarchy of structure, function and development. In every change of state of a system with time, there is some sort of change in its component; to identify where the aging process begins is to identify the particular changes in substance or organisation that are critical to the altered performance for each system in each level.

We have explained aging in terms of a general decay with time where the change of aging involves a decrease in reactivity of the system. However, it should be recognised that all the events occurring with age at the molecular, cellular, and organismic levels are inter-related. The higher the level of the system, the more inter-dependent units and subunits of which it is composed, the more striking will be the progressive interference with function as these accidents and failings accumulate. Small changes in the structure of a unit can lead to big changes in the performance of the whole under these conditions; and, in general, the more highly integrated functions are more vulnerable to the ravages of time than are the simpler ones.

Leonard Hayflick (Sci American, 242, No. 1, Jan 1980) in examining aging at the cellular level found that there was a finite life span of cells at 50-doublings. Several subsequent discoveries in his laboratory experiments of human fibroblasts showed that there was no clear correlation between the number of doublings and the age of the donor. Since then, studies on cultured fibroblasts obtained from human skin biopsies seem to suggest that the number of population doublings undergone by normal human fibroblasts in culture is inversely proportional to the age of the donor. It is possible therefore to conclude that certain cells have a limited uniform life span which renders aging as the rate of cell division over rate of dying cells, and, that certain cells have a varying life span dependent on age which establishes aging as the shortened life span of cells in older people. More specialized cells such as nerve cells, endocrine cells, and some cells of the immune system divide little if at all after maturity.

At the molecular level, it is widely believed that another aspect of aging can be attributed to the genetic message. One hypothesis is that over a period of time the information in the processing system represented by the transcription and translation of the genetic message in DNA and RNA and into enzymes and other protein molecules might be increasingly subject to error. Such errors would give rise to faulty enzyme molecules and lead to a decline in the functional abilities of the cell. Although there are repair systems, studies have shown that the capacity for DNA repair in cultured normal human cells decreases as its approaches the limit of its replication. Although this hypothesis has been tested in several laboratories by tracing protein synthesis in aging cells, the results have not yielded good evidence to support it.

Another hypothesis is Bidder's "off-switches" theory which is based on the idea that there is a class of regulator genes whose actions lead to the programmed suppression of other genes, until such time as the system approaches its species, size norm, when the genes which inhibit growth will be activated, thus beginning a process of decline in the body affecting both intracellular and extracellular substances causing wear and tear, colloid deterioration, and inherent running down of tissues, nervous, endocrine, vascular or connective.

At the tissue level, the striking changes in the structure and chemistry of collagen fibres and the

surrounding ground substance are manifested by cross-linkages which increase proportionally in the aging process. As it ages, collagen becomes tougher, more crystalline, more difficult to dissolve, its tensile strength decreases and its plasticizing function is impaired or lost. Ground substance increases in density and aggregation, becoming less permeable to the flow of substances working through it.

Lipofuscin age pigments also increase at a more or less constant rate. Though the degree to which lipofuscin residues reduce cell function has not yet been established it is possible that their aggregations could decrease cellular plasticity and thus interfere with the ability of the cell to maintain itself.

The effects of these take its toll on the more complex organs as we can see from Strehler's figure. A brief look at the central nervous system will also reveal aging beginning at the cellular level. Numerically, the neurons represent a minor constituent of the system; however because these cells do not reproduce after early postnatal life, they may be regarded as a prototype cell paralleling the life-span of the organism. The aging brain can be seen in terms of inverse relationships in neuronial-glial elements and cytoplasmic changes in cells. Lipofuscin pigments can be explained in terms of cellular dysfunction which brings about incomplete digestion of lipids by the lysozomes. Whether it is increasing auto-intoxication, cellular wear and tear, genetic hypotheses, mechanical-chemical explanations of pathologic changes in the tissues, the aging process can be traced to histological changes, cessation of somatic division, decreases in the numbers of non-replaceable cell types and the displacement of functional parts by non-functional residues.

The impairment of cardiovascular functions can be traced to degenerative changes at the tissue level which involves numerous inter-cellular alterations. Changes with age in lymphatic and reticuloendothelial elements, viewed as reflective of disturbances in immunologic function in which the body appears to turn upon itself as occurs in certain autoimmune diseases, is based on the assumption that aging results from reactions between cells rather than within individual cells.

Whether as a result of exposure to radiation, drugs or environmental change, somatic mutations or the escape of sequestrated cells have been seized upon as explanations for antigenic alterations in auto-immunity.

**PROPHYLAXIS/TREATMENT:**

Having emphasized the importance of cellular function in the process of aging, and in the light of this understanding, one can then go on to speculate on the possibilities of extending the life-span of an inherently aging human system.

Ana Aslan (Rockstein, 1974) of the Bucharest Institute of Geriatrics, Romania which was founded for the prime purpose of studying possible methods for the prevention and treatment of pathological signs for advancing age. Its research approach was based on the concept that the process of aging could be influenced not only through hygienic measures, but also by developing substances which acted at the level of cellular metabolism, particularly those enhancing anabolic activity. A programme involving procaine hydrochloric solution was initiated which while showing encouraging results also proved that commercially available preparations were not stable for more than a 6-month period at most. A new product known as Gerovital $H_3$ was developed which modifies procaine HCl through the addition of benzoic acid and potassium metabisulfate which also serve as anti-oxidant and preservative agents. It claimed beneficial effects in a variety of unrelated disorders associated with the aging process such as hypertension, arthritis, angina pectoris, depression and other conditions. These range of claims have been constantly greeted with skepticism and while it certainly encourages pharmacological research into the retardation of the aging process, it can at best be a selective inhibitor of certain aging processes which are but symptoms of an underlying mechanism which is at once complex and integrative.

An elixir of youth necessarily implies a sustaining of the physiological and mental vigour of the young, which presents a multifaceted problem because of the inexorable decline in peak functional capacity after age 30. $GH_3$ has been shown to be an effective but reasonable inhibitor of monoamine oxidase (MAO) (Marfarlane 1974) which is known to increase with age in tissues of humans. There is however, no attack at the cell level which is an important focus of age changes. This is typical of the level of pharmaceutical research which is usually based on arresting symptoms rather than the prevention of causative factors.

Besides, pharmaceutical preparations must include dietary supplementation, drugs which stimulate mental function, supplementation with hormones which become deficient, immunological surveillance and drugs which modify body temperative.

**THE FUTURE:**

An understanding of aging at the cellular and

molecular level reveals a tougher fight against a finite life-span of cells which sparks off the system of degenerative decay. Besides, natural selection between cells does not provide a method of producing an organism which is at the same time unchanging and potentially immortal. However, so long as a large part of the DNA in the nuclei of higher organisms is unexplained the possibility should be borne in mind that an answer could be found in the genetic code.

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# Sexual Sterilisation*

Terry McCarthy FRCS, MRCOG, AM

This paper aims to cover some of the general and specific points about sterilisation which have special relevance in Singapore. At the end of the paper a list of references is appended mainly from local journals which highlights the methods used and complications encountered in our community. In fact, Singapore probably has better studies on the results and successes of its sterilisation program than any other country in the world.

There are currently between 8000-10000 sterilisation operations performed per year in Singapore of which under 400 are vasectomy operations[9]. Over 20% of the female population in the fertile age group (15-45) use sterilisation as their choice of birth control and the majority of these operations are performed in the immediate post-partum period. There are a small group of people (both male and female) who undergo sterilisation as part of the sterilisation scheme (i.e. those possessing AA marriage certificates) or for medical indications but the vast majority do so because they feel that their families are complete. The proportionate effects of the several social incentives and disincentives are not clear but undoubtedly such policies as the priorities for school entrance do play a significant part in the choice of contraceptive method and of the timing of the operation[10].

## FEMALE STERILISATION

There are four main variables for the sterilisation operations in the female which will affect the choice of operative method and the incidence of any complications which may arise. These are (1) timing in relation to a pregnancy (2) anaesthesia (3) route of access (4) technique of occlusion of the fallopian tubes. In fact they are all interdependent since for instance, a Pomeroy operation cannot be performed through a laparoscope nor can culdoscopic ligation be performed safely under general anaesthesia.

### (1) Timing of Sterilisation

Most of our patients choose post-partum sterilisation probably because it causes least disruption to the family unit. The operation is usually performed on the day after delivery and the patient goes home on the following day. The same is true of ligation following immediately after abortion and from local figures there is no evidence of increased morbidity if the ligation is performed at this time though this finding is not universally accepted[6].

Sterilisation can also be performed concurrently with caesarean section (particularly after 2 or 3 such operations) both for medical and family planning indications. In such cases it is often important to make sure that the baby is normal and healthy before the ligation is performed unless the mother has given explicit instructions that she wants to be sterilised whatever the outcome.

Interval sterilisation (i.e. at least 6 weeks after childbirth or abortion) has several advantages. It gives the parents time for second thought and will reduce the number of early regrets. It will also allow time for full assessment of the child. Complications such as heart disease which may not have been detected early may be recognised in the intervening period. Also there is evidence that there is a significantly lower failure rate in interval sterilisation[6]. Despite these advantages the combined procedures (Post-partum sterilisation and abortion with ligation) are much more popular in our community.

### (2) Anaesthesia

A major advantage of both post-partum sterilisation (PPS) and interval ligation is that these

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This paper is a transcript of a talk delivered at a "teach in" session held on January 29, 1980 at Maxwell Road OPD jointly organised by the College of GP's and the Family Planning Association of Singapore.

procedures can be performed under local anaesthesia. However, in practice, they are both usually performed under epidural or general anaesthesia since many patients experience pain when the peritoneum is handled under local anaesthesia and since the access is much better if the abdominal wall is relaxed and the bowels are not pushed forward towards the operating site. Regional or general anaesthesia allows a smaller incision, better access and greater patient comfort particularly in obese women.

Again it is possible to perform laparoscopy under local anaesthesia even on an outpatient basis and this was done several years ago at Kandang Kerbau Hospital. However, the higher failure rate, difficulty in visualisation in some patients and patient discomfort are again encountered and all laparoscopies are currently performed using general anaesthesia.

Culdoscopic ligation is usually performed under neuroleptic anaesthesia (Droperidol and Fentanyl) in order to allow the patient to stay in the highly uncomfortable 'knee chest position' for 15 minutes or so. This requires an anaesthetist to be present during the entire procedure — the patient may stop breathing unless reminded to do so since her respiratory drive is suppressed.

(3) **Route of Access**

The route of access primarily determines which methods of tubal occlusion are available for use. The most versatile is the short suprapubic incision (for interval ligation) or the small vertical midline incision used for PPS which allows any sterilisation method to be used. A semilunar subumbilical incision can be used in post-partum patients which leaves a nice scar but is not easily extended and can lead to operative difficulty particularly when the patient is in pain or if the uterus has partially involuted and the fallopian tubes are not easily brought to the incision.

Both vaginal and culdoscopic ligation give adequate access to the lateral half of the tubes only and hence fimbrectomy or 'figure 8' ligations have been mainly used though silastic bands have been applied. The only real advantage of the vaginal approach is the absence of an abdominal scar which is in general outweighed by the disadvantages of increased failure and complication rates in both the posterior colpotomy and culdoscopic ligation methods. One further point is that both these methods require surgeons with particular expertise if they are to be performed quickly and with minimal complications.

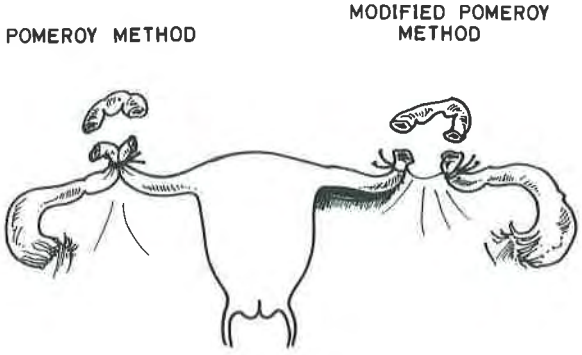
Laparoscopy is best performed through an intra-umbilical incision (which leaves a much less visible scar than the semilunar incision just below the umbilicus). In the past diathermy was widely used but in the Singapore experience this technique had an unacceptably high failure rate (over 4.0%)[2] from our initial cases. This is not the experience of other countries[6] where the failure rate for laparoscopy is no higher than for the laparotomy and our results may have been biased by an inadequate technique on the part of one or two individual doctors. There is also danger of damage to nearby bowel, bladder and the skin when using the monopolar instruments. Because of limited access and the need for specialised laparoscopes the only other ligation method which is currently available in Singapore for use via a laparoscope is the Silastic Band (Falope Ring).

(4) **Technique of Occlusion**

The most important factor in the success or failure of the ligation is the technique used for occlusion. There are over 200 alternatives which have been advocated but only a few of these have been widely used in Singapore.

The modified Pomeroy operation (in which the tube is divided and ligated with the tubes apart, see Figure 1) is probably the most widely used procedure with the lowest complication rate. As a general rule the overall failure rate increases the further the operation is performed towards the lateral ends of the tubes (i.e. in vaginal operations). However, the incidence of subsequent ectopic pregnancy appears to be lowered in these patients. The Uchida operation or two-site diathermy under direct vision would appear to reduce the chance of subsequent pregnancy to a minimum but involve greater disruption of tubal anatomy perhaps affecting the ovarian blood supply and any possibility of subsequent reversal.

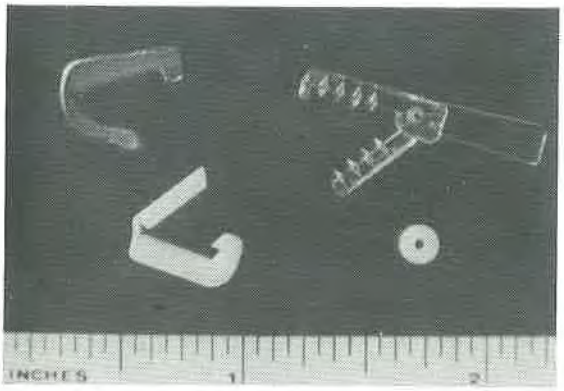
**Figure 1**



Various bands and clips are now available to occlude the Fallopian tubes which are claimed to reduce tubal damage and to increase the chances of successful reversal should this ever be attempted. Four of these have been used at Kandang Kerbau Hospital (see Figure 2). The Silastic Band and Hulko-Clemens clip may be applied via the laparoscope while the Secu and Filshie clips are applied through an abdominal incision. Though they may be convenient and quick there seems no reason to believe that these devices should be any more effective than straightforward ligation (the Madelener technique) and our recent figures are showing this to be true.

Hysterectomy is rarely performed for sterilisation alone except in mental defectives and some psychiatric cases though it may be performed in a patient with menstrual problems or other gynaecologic disease. Hysteroscopy had such a high failure rate that it is not a practical method for sterilisation.

**Figure 2**



## COMPLICATIONS

The complications of sterilisation are summarised in Table 1.

**Table 1**

- Operative complications
- Failure (including ectopic pregnancy)
- Later desire for pregnancy
- Psychological problems
- Menstrual and other problems

The incidence of operative complications depends mainly on the surgical technique employed. In general it is true to say they are highest when the access is poor and when sophisticated instruments are used (laparoscopy, culdoscopy) and lowest in the interval and PPS operations. This is also reflected in the failure rates which are 0.2 – 0.4% for interval operations, 0.5 to 1% for PPS, 2 – 3% for laparoscopy (over 4% in our initial experience with diathermy), 2 – 3% in culdoscopic ligation and 20 – 30% for hysteroscopic procedures[4]. Hysterectomy has a 0% failure rate (though 13 cases have been recorded in the World literature!) but has a much higher morbidity and mortality rate.

A study in Singapore has shown that in women 74% had no change in health after ligation while 17% felt better and 8% worse. 6.3% of ligated cases felt regret and this was more often found in 4 groups[3] (Table 2).

**Table 2**

- Fewer than 4 children (2 sons)
- Sterilisation for medical reasons
- Change in marital status
- Unstable personality

Sixty percent of sterilised patients in Singapore noticed no change in menstrual function while loss was increased in 29% and decreased in 13%. 57% found no change in their sexual relationships while 4% were worse and 36% experienced an improvement[3].

## MALE STERILISATION

Most of this discussion has been centred on on female sterilisation. This is not a chauvinistic attitude but simply reflects the reality of sterilisation in Singapore today. The Asian male seems to do badly after sterilisation when compared with his European counterpart as the figures in Table 3 show.

**Table 3**

Vasectomy and Health

| | No Change | Improved | Worse |
|---|---|---|---|
| U K (1969) | 88.4% | 11.4% | 0.2% |
| India (1969) | 72.3% | 6.1% | 21.6% |
| Malaysia (1973) | | | 17% felt worse |
| India (1970) | | | 40% (23% felt weaker) |

These unexplained results are more fully analysed in Population Reports[7].

## BOTH SEXES

There is not much time to dwell on the many aspects of counselling for sterilisation. Counselling should obviously be in the patient's own language or dialect so that all its complications can be fully discussed. Worries about damage to health, potency and physical attractiveness must be brought to light and discussed openly.

There is now much talk of 'reversible' methods of sterilisation and the use of microsurgery. Table 4 shows that considerable success has been achieved in other countries for reversal of operations in both sexes[7,8].

**Table 4**

Reversal of Sterilisation

| | **Conventional** | **Microsurgery** |
|---|---|---|
| Females | 20 – 50% births (plus 7 – 30% ectopic) | 40 – 70% births (plus 0 – 20% ectopic) |
| Males | 40 – 50% births (7 – 80% patency) | 50 – 70% births (90% patency) |

Using microsurgical techniques the possibilities for reversal of female sterilisation have now equalled those of the male at least as far as the birth rate is concerned. However, in Singapore Government Hospitals reversal of sterilisation can only be attempted after permission has been granted on an individual basis by the Ministry of Health and sterilisation should in any case only be performed in either sex with the patient's full knowledge that this is a permanent procedure.

## SUMMARY

Procedures for sterilisation tend to go through cycles of fashion as one method is replaced by another and subsequently ousted by yet another "improvement". Minilap interval ligation, PPS and vasectomy are well established and safe methods. Laparoscopy is still widely used both because of the enthusiasm for it by gynaecologists and because such a small incision can be used though the failure rate (especially for diathermy) is high in the Singapore experience. Culdoscopy is now no longer performed except by special request and our experience is shared by the other centres in the world whose initial enthusiasm for the method has abated.

Whether or not the newer clip or band ligations offer advantages is still under assessment and the University Unit at Kandang Kerbau Hospital is currently involved in a World Health Organization Study aimed at assessing the advantages and disadvantages of these devices.

## ACKNOWLEDGEMENT

My thanks are due to A/P Mark Cheng and Prof S S Ratnam for reviewing this transcript and for making suggestions for alterations and improvements to the manuscript and to Ms Surjit Kaur for secretarial help.

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# A case report illustrating the importance of recognising extramammary paget's disease of the perianal region

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## INTRODUCTION

Lesions can look benign and yet be so potentially malignant. This is well exemplified by many pre-malignant conditions like Bowen's Disease, leukoplakia, etc. What is less well known are lesions manifesting as cutaneous manifestations of an occult internal malignancy. Some of these cutaneous manifestations can be very benign looking and their significance unappreciated. Extramammary Paget's Disease of the perianal region associated with an underlying carcinoma is a rare lesion. It often escapes detection because it can mimic a whole range of common perianal conditions. This report is of one such case in point.

Patient: TTK 45 years male

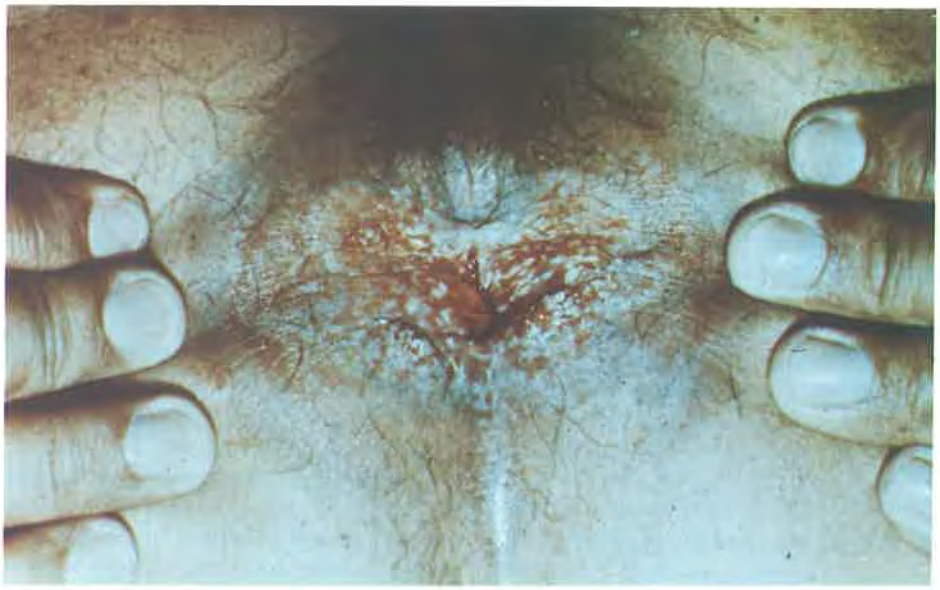
## CLINICAL EVENTS:

A 45 year old Chinese male was seen at the Middle Road Skin Clinic in May 1976 with a 1-year history of eruptions around the anus. There was no associated loss of weight, change in bowel habits or bloody stools. He had had treatment with antiseptic creams by a number of general practitioners for 1 year.

On clinical examination, the patient was found to be a well built Chinese male weighing 81 kgm. There was nothing abnormal revealed on general examination. Local examination of the perianal region, (PHOTOGRAPH I) revealed a demarcated, erythematous, oozing, crusted lesion around the anal opening. Scrapings were negative for monilia and there was no evidence of superimposed allergic contact dermatitis. At that time a diagnosis of flexural eczema and/or psoariasis was entertained.

He was treated with steroid creams for six months, response to which was slow and with minimal relief in the degree of local itch. Hence, a biopsy of the lesion was done. The histological picture was consistent with that of an extramammary Paget's Disease with a possible underlying adenocarcinoma.

The patient was therefore immediately referred to the Dept of Surgery, Toa Payoh Hospital. General clinical examination on 14.11.76 showed



the previously noted eczematous lesion but in addition, a nodular induration was felt in the anus on rectal examination. Clinically, this finding was highly suggestive of carcinoma of the anorectum.

A search for regional lymphadenopathy showed that the left inguinal nodes were palpably enlarged. Further investigations followed: a sigmoidoscopy and barium enema study were essentially normal but a repeat biopsy of the anal verge and this time with a sampling of the groin nodes showed adenocarcinoma of the anal canal with lymph node secondaries.

In December 1976, an abdominal perineal resection with bilateral excision of superficial inguinal nodes was performed. Patient was given preoperative 5-fluorouracil 500 mg daily – 5 doses. Postoperatively he was treated with intravenous 5-fluorouracil 250 mg daily for 5 days and then 250 mg weekly for a further 3 months. The resected specimen consisted of a 3cm by 5cm long warty, whitish annular growth at the anorectal junction which has infiltrated the anal sphincter. The tumor on histological section was graded poorly differentiated.

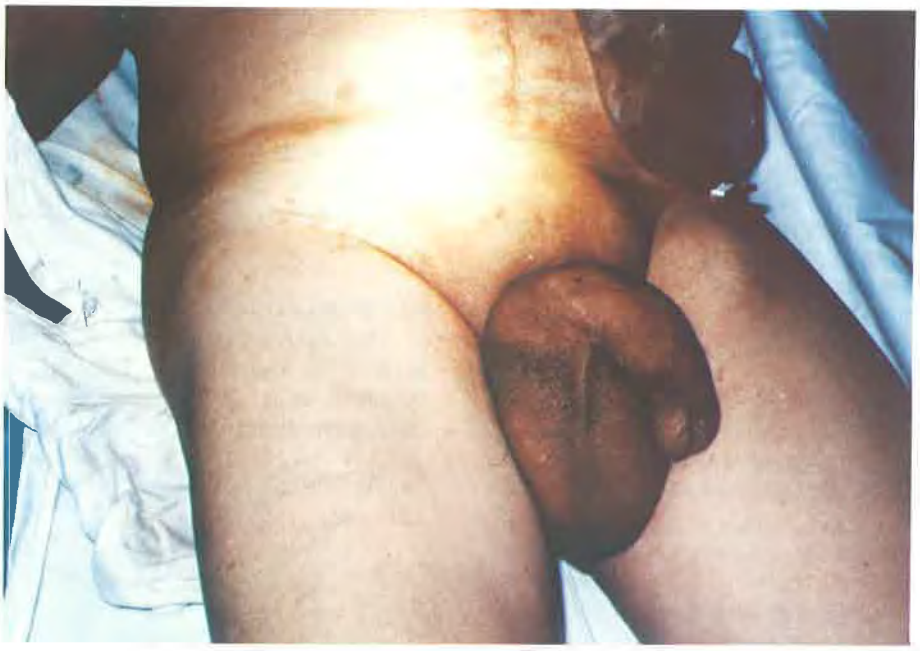
Ten months later, the patient developed a swelling in his left groin which had gradually increased in size over the previous 6 months. There was associated lymphoedema of the left groin, penis and scrotum – PHOTOGRAPH II. It was decided to summit the patient to a re-exploration of the left groin. During this procedure, numerous large and hard nodes belonging to the left inguinal group and a number around the saphenous opening was noted. A lymph node excision removing superficial and deep nodes followed. Histology revealed deposits of adenocarcinoma. Adjuvant therapy consisted of postoperative radiotherapy and intravenous 5-fluorouracil administered 500 mg daily for 5 days and then once a week maintainance.

Four months after the second operation, he was noted to have swelling of the left thigh, penis, scrotum and pain in the left lower limb. Clinical examination revealed an associated 4 cm by 3 cm area of induration suprapubically. Although the liver was not palpable, a liver scan revealed secondary deposits in the right lobe. Pulmonary metastases were obvious on a plain chest film. Radiotherapy was stopped & combination chemotherapy instituted for advanced disease. The latter consisted of cyclophosphamide, vincristine, and methotrexate & 5-fluorouracil administered daily for 5 days.

In June 1978, patient was admitted for severe breathlessness & anaemia and died on 13 June 1978, i.e. approx. 1½ years after initial surgical treatment.

**DISCUSSION:**

Extramammary Paget's disease is a clinical entity characterized by an itchy, subacute or chronic eczematoid lesion of the skin which fails to respond to conventional therapy and which is associated with an underlying adenocarcinoma.



In the perianal region this lesion may be associated with an apocrine carcinoma, a carcinoma of the rectum, a mucinous or squamous cell carcinoma.[1]

The disease commonly occurs between the ages of 35 – 82 years with a mean at 62 years. There is a slight female preponderance. The vulval and perianal region has the highest incidence – 75% (Helwig & Graham, 1963)[2]. The median size of each lesion is about 3 cm and inspection usually reveals an erythematous to whitish gray, elevated, ulcerated, crusted, scaly and eczematoid lesion. More than 50% of patients complain of itch, some of pain and few of bleeding. The initial clinical diagnosis is usually wrong – that of eczema or some variety of premalignant lesion being made eg. leukphlakia or Bowen's Disease. At the later stage, the diagnosis of frank carcinoma can be made fairly easily. This was precisely the mode of presentation in this case; the seriousness of the lesion being unappreciated, initially for one entire year by a number of General Practitioners and a further 6 months after referral to a skin clinic. The difficulty in diagnosis was well illustrated in this patient in whom the usual general and local examination as well as laboratory investigations were unfruitful. Surgical excision[3] forms the mainstay of treatment, for the process tends to recur and not to respond to radiotherapy, radium, dissication or currettement. In early lesions wide local excision to a cancer free margin is preferred if there is minimal or no infiltration and this in itself may be adequate. Radical surgery[4] eg. abdominal-perineal resection, is necessary when there is established disease and deep infiltration. For more advanced cases with regional lymph node metastasis an in-continuity regional lymph node excision may have to be included in the treatment regimen. Also for such advanced lesions adjuvant chemo- or radiotherapy is recommended pre- and post-operatively. It is unnecessary to emphasize the need for close follow-up. The treatment given to this patient was radical abdominal-perineal resection with en-bloc dissection of the left inguinal nodes and pre- and post-operative chemotherapy.

Helwig & Graham's (1963)[2] series of 40 patients with anogenital Extramammary Paget's Disease showed approximately a 20% 5-year survival from the time of the first biopsy. It was also noted that 50% are dead within 20 months. Our patient died at the 18th month after the diagnosis was established and treatment rendered.

## SUMMARY & CONCLUSION

This paper highlights an unusual presentation of an external manifestation of an internal malignancy. The benign looking lesion of an Extramammary Paget's Disease of the perianal region in a 45 year old Chinese male was treated as a simple eczematous lesion for 1½ years. Because a rectal examination was not performed, the opportunity for early diagnosis was therefore not taken advantage of. When the diagnosis was finally established, regional lymph node spread had already occurred and treatment then instituted was for advanced disease. Prognosis as would be expected was not as good as it would have been if earlier diagnosis and treatment was executed. In addition, the morbidity attendant on a lymph node resection had to be accepted.

It is vital that General Practitioners and Dermatologists remember that cutaneous lesions may be an indicator of internal malignancy and in particular be aware of the entity known as perianal Extramammary Paget's disease which is illustrated here co-existing with a carcinoma of the anorectum.

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## ACKNOWLEDGEMENTS:


The Author thanks Mr R Nambiar, Senior Surgeon & Head of the Dept of Surgery, Toa Payoh Hospital for his invaluable help & encouragement and Dr V S Rajan, Senior Dermatologist & Head of the Middle Road Hospital for his help & clinical photographs.

# Use of fiberoptic oesophagogastroduodenoscopy for investigating the upper gastrointestinal tract

Dr Peter Lim Huat Chye, MB,BS,MMED (Surg),
Dr N K N Iyer, MB,BS,MMED (Anaes),

## INTRODUCTION

The limitations of conventional oesophagoscopy and gastroscopy with the rigid instruments and the relative inaccuracy of contrast radiology have prompted the introduction of fiberoptic instruments for the investigation of upper gastrointestinal disorders. Many types of instruments are now available for panendoscopy of the upper gastrointestinal tract. We have had experience with the Fujinon UGI-F Panendoscope which has a field of view of 105 degrees and a terminal end bending capability of 210 degrees upwards, 90 degrees downwards and left and right deflections of 90 degrees each.

## CLINICAL MATERIAL & METHOD

Thirty cases were referred for oesophagogastroduodenoscopy at the Dept of Surgery, Changi Hospital between November 1980 to January 1981. A study of the records shows that the main indications (Diagram I ) for these referrals were:

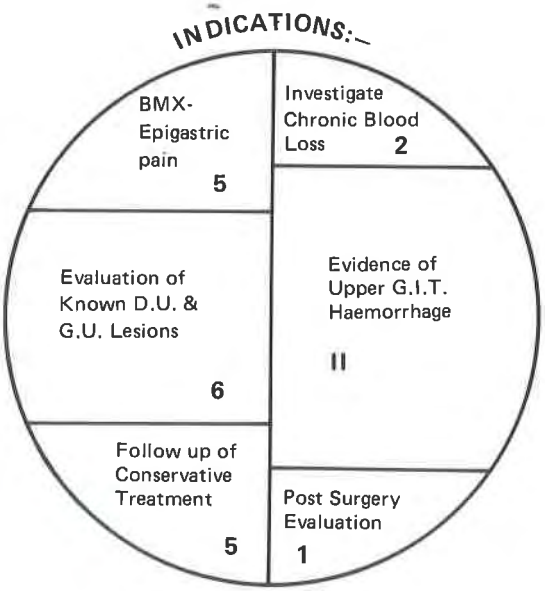


**DIAGRAM I**

Barium meal negative epigastric pain (5 cases), evaluation of known gastroduodenal ulcers and oesophageal lesions (6 cases), the follow up of conservative management (5 cases), investigation of chronic blood loss of unknown origin (2 cases), following evidence of upper gastrointestinal tract haeomorrhage (11 cases), post gastric surgery evaluation (1 case).

No special pre-endoscopy preparation was needed except for the patient to starve from midnight the night before the endoscopy session which takes place first thing in the morning. Just prior to the procedure, the patient sucks 2 benzocaine lozenges and has a spray of 4 per cent lignocaine directed at the oropharyngeal region. This facilitates easy intubation. Subsequent administration of intramuscular diazepam 10 mg and intravenous buscopan 20 mg ensures patient comfort and adequate suppression of gastrointestinal secretions and motility. This scheme for sedation was fully supervised by our resident anaesthetist who reported no single instance of complication in this series. Using the forward viewing Fujinon UGI-F Panendoscope, all cases were successfully intubated and an endoscopic diagnosis established.

## RESULTS (Diagram II)

Gastroduodenal ulceration was the major endoscopic finding, comprising 12 cases (D.U. = 7, G.U. = 5), 5 cases of erosive gastritis were diagnosed, a gastric polyp was seen in 1 case and a gastric cancer was detected in 1 patient. There were also 2 cases of acute gastritis. A normal finding was obtained in 9 of the examinations.

In 7 cases (5= +, 2= –), the Barium meal diagnosis was confirmed by the endoscopy, Definitive radiological diagnosis was refuted in 6 reports and an unnecessary laparotomy was avoided in 2 of these. The indication for surgery was reinforced by the endoscopic finding in 4 of the cases. By bypassing the barium meal study the diagnosis was established solely at fiberoptic examination in 10 cases. This was necessary in the latter because of a long wait for the barium meal appointment.

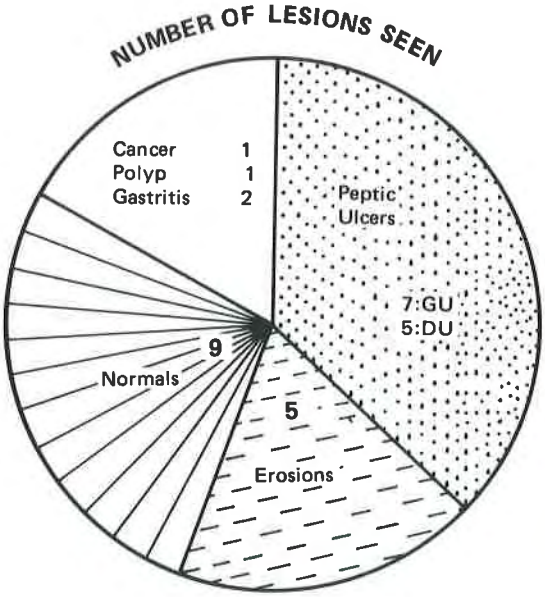


**DIAGRAM II**

## CONCLUSION

With adequate training we have found Upper Gastrointestinal Panendoscopy with the fiberoptic instrument to be a valuable procedure in the diagnosis of upper gastrointestinal pathology, especially in those cases where conventional methods have failed, are not readily available, or have produced equivocal results. With practice, the endoscopist can complete upper gastrointestinal examination in 10 minutes. It has generally been accepted that the rate of correct diagnosis using the fiberscope is between 85 to 90 per cent. On the other hand, the comparative inaccuracy of the barium meal (46.2 per cent in this series) justifies the slightly increased cost in the use of the fiberscope in terms of resources and trained manpower. Endoscopy with the forward viewing instrument being both safe and effective, we question the need for the queue for the barium meal.

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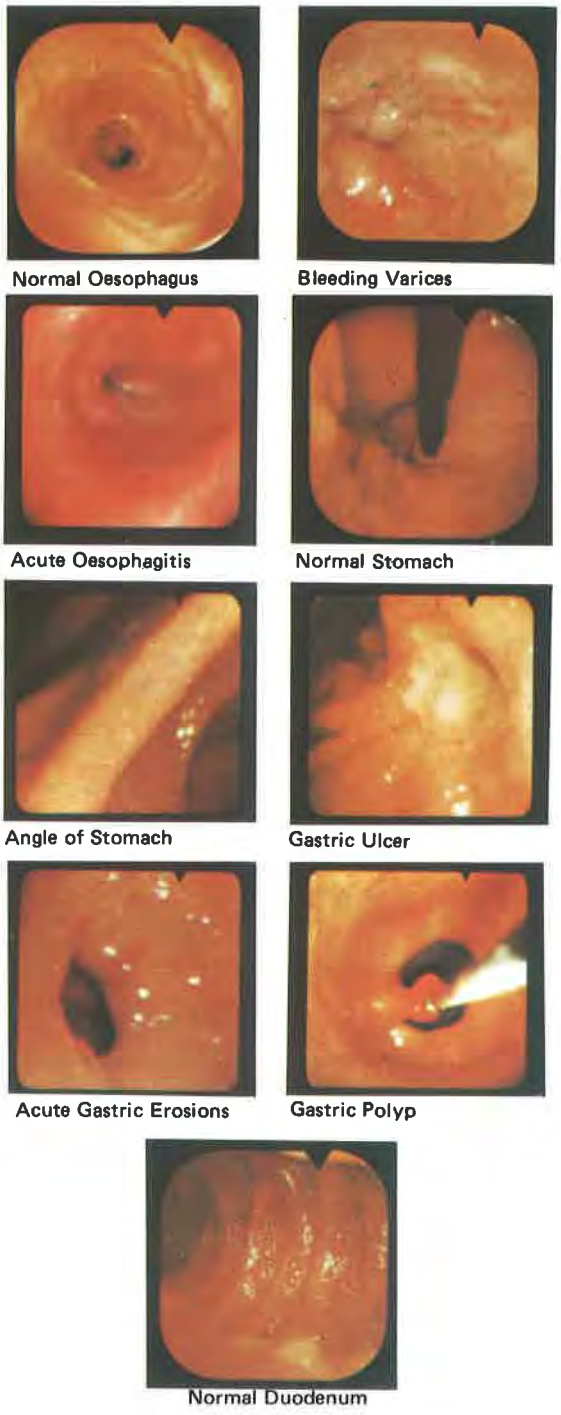
## ACKNOWLEDGEMENT

The authors thank Mr P N Unni, Senior Surgeon & Head, Dept of Surgery, Changi Hospital for his help and guidance without which this paper would not have been possible.

## VIEWS THRU' THE FIBERSCOPE



# Letter to the Editor

Dear Sir

**MEASURING MEDICAL COMPETENCE**

I read with interest your editorial on Measuring Medical Competence in the Jan/Mar 1981 edition of the Singapore Family Physician. Though I fully agree with the points you make in favour of clinical examination, you seem to have omitted what is to me perhaps the most significant point of all – what the student (or postgraduate) sees as his priorities in skills and cognitive training when he sets his learning goals.

Undoubtedly the good student will weigh up the exam requirements and concentrate predominantly on these aspects. For instance, in the OBGYN final examination in Singapore, every student knows that he will have to perform a vaginal examination as part of his assessment and hence the large crowds of students who fill the outpatients in the last weeks before the exam. Equally important is the waste of effort and time nearly all students spend on learning the names and functions of surgical instruments which they will most likely never see again because these too are a traditional part of the 'viva voce' examination.

Though I do not feel that the same argument can support the oral exam, I feel that clinical skills testing is vital as a stimulus to the examinee to master certain necessary skills even if the assessment procedures used for the exam itself are not as objective as the MCQ type question.

To take this argument further, there seems to be a good case for including a substantial amount of skills testing in all examinations which are used for professional certification. Knowledge can and does fade as the years pass but acquired technical skills are (perhaps fortunately) retained once thoroughly mastered. The fact that such testing of clinical skills causes some logistic problems does not detract from its importance.

To practice competently in any specialised branch of medicine be it general practice or OBGYN, the doctor must have achieved a certain broad basis of knowledge plus certain well defined clinical skills. These can and should be tested and a combination of MCQ tests for depth and breadth of knowledge combined with clinical skill testing is necessary.

I look forward with interest and expectation to the emergence of a larger group of specialist general practitioners once the MCGP (Singapore) has become established and recognised.

**Terry McCarthy**
**ASSOCIATE PROFESSOR**
**DEPARTMENT OF OB/GYN**
**NATIONAL UNIVERSITY OF SINGAPORE**

# NEWS FROM THE COUNCIL

**The Eighth College Council (1981-1983)**

The Tenth Annual General Meeting of the College of General Practitioners Singapore was held on Sunday, 24 May 1981. The following are the Office-Bearers for the Eighth College Council (1981-1983):

| | | |
|---|---|---|
| President | — | Dr. Victor L. Fernandez |
| Vice-President | — | Dr. Frederick Samuel |
| Censor-in-Chief | — | Dr. James Chang Ming Yu |
| Honorary Secretary | — | Dr. Lim Kim Leong |
| Honorary Treasurer | — | Dr. Philbert S.S. Chin |
| Council Members | — | Dr. Paul S.M. Chan |
| | | Dr. Gabriel P.K. Chiang |
| | | Dr. Hia Kwee Yang |
| | | Dr. Alfred W.T. Loh |
| | | Dr. Moti H. Vaswani |
| Honorary Editor | — | Dr. Leong Vie Chung |

**Ninth College Examination**

The Ninth College Examination for Diplomate Membership of the College will be held on:

| | | |
|---|---|---|
| Sunday, 4 October 1981 | — | Theory |
| Thursday, 8 October 1981 | — | Clinicals. |

**Tenth WONCA World Conference**

The College of General Practitioners Singapore will be hosting the Tenth WONCA World Conference on Family Medicine, in Singapore, from Friday, May 20 to Tuesday, May 24, 1983. The theme of the Conference is, "The Family Physician in a Changing World". The Conference will be held at the Mandarin Hotel, Singapore. The Conference Organising Committee has been formed comprising the following:

| | | |
|---|---|---|
| Chairman | — | Dr. Alfred W.T. Loh |
| Vice-Chairman & Honorary Treasurer | — | Dr. Victor L. Fernandez |
| Honorary Organising Secretary | — | Dr. Lim Kim Leong |
| Chairman, Scientific Sub-Committee | — | Dr. Frederick Samuel |
| Chairman, Exhibition Sub-Committee | — | Dr. Paul S.M. Chan |
| Chairman, Social Sub-Committee | — | Dr. Moti H. Vaswani. |

# Medical News

## Green light for safe period

**By Dr Paddy Neustatter**

LONDON — In an attempt to make the 'safe period' of contraception easier to identify, a computerised thermometer has been invented which indicates when it is safe to have intercourse.

Present methods of identifying the safe period involve the accurate recording, transcribing and interpreting of the daily body temperature by the woman, says bioengineer, Mr Heinz Wolff.

He was a member of the WHO committee concerned with the problem of contraception in the Third World when he proposed the idea of the special thermometer.

By having a temperature probe attached to a minicomputer, it is possible for the machine to compare the body temperature with a pattern established from 500 menstrual cycles. When there are three temperatures that are above the average of the preceding six readings, this indicates ovulation has occurred. Two days after ovulation is the safe period, which the machine will indicate by showing a green light.

The machine can be made small enough to fit into a pendant, says Mr Wolff, and WHO trials should be starting in three Third World countries within the next year.

## Condom meal for contraband

THE condom gets some strange usages, but the latest is for drug smuggling, particularly hashish oil.

Ingestion of drug-filled condoms is proving to be a new problem in Australia, since the flight time from Asia is short.

When the narcotics agents nab such travellers suspected of carrying illegal duty free, what is the best management to ensure the well-being of the patient, and the placement of the drugs in the hands, so to speak, of the rightful authorities?

The answer is, let nature take its course.

Three cases are reported from Sydney Hospital, in New South Wales. The patients were admitted having ingested the condoms 36 hours previously, just before their flight from Bombay to Sydney.

To facilitate ingestion, the condoms were coated with talcum powder and coconut oil. The patients exhibited no abnormal physical findings, apart from slight abdominal cramps.

In the 48 hours before their discharge from hospital, 66 condoms were collected from the stools of the three patients, each containing between 20 and 30 grams of hashish oil. X-rays taken on admission demonstrated positive findings in only one of the patients, and there was no evidence of obstruction.

It seems that condoms or baloons will find their way through the bowel without much difficulty, unless the bowel has become narrowed in some way through surgery, infection, or trauma.

If a condom carrying hashish oil or marijuana ruptures, it ususally results in a very "stoned" patient. But there have been no reports of fatalities.

However, there are previous reports that this method of drug smuggling has been used for cocaine, and surgery was performed as the risks of a lethal overdose from the rupture of the condom were too great. *(Med J Aust* Nov. 1, 1980, Vol. 2, p. 509).

## Formation of the Sale of Infant Foods Ethics Committee, Singapore (SIFECS)

**by Professor Wong Hock Boon**[1],
M.B.B.S., F.R.C.P. (Edin), F.R.C.P. (Glas), F.R.A.C.P., D.C.H., P.J.G., P.P.A.

Since 1950, I have been monitoring (1) the prevalence of breastfeeding among the lower

1. Head, Department of Paediatrics, National University of Singapore

and higher socio-economic groups in Singapore. Over a period of 20 years, it was seen that whereas 90% of the lower socio-economic group initiated breastfeeding in 1951, this had dropped to 51% by 1971; and whereas 77% of mothers were still breastfeeding their babies at 3 months of age in 1951, this had dropped alarmingly to 5% in 1971. We therefore organised seminars and forums for doctors and the public to try and reverse this trend. However, one of the factors militating against breastfeeding was the unethical marketing practices of the commercial milk firms. In November 1974, with the assistance of the Protein-Calorie Advisory Group (PAG) of the United Nations, a Regional Seminar was held in Singapore with participants (doctors and commercial representatives) from Indonesia, Malaysia, Philippines, Singapore, Sri Lanka and Thailand. One of the recommendations (2) arising from the Seminar was that a Committee should be formed to oversee the marketing practices of the milk firms. As a result, an Ad-Hoc Committee was formed in Singapore of which I was the Chairman. Complaints of unethical practices were channelled to this Committee and attempts were made to correct these. However, the effectiveness of the Ad-Hoc Committee was limited, as it had no official backing, and some milk firms repeatedly broke the rules which they did not subscribe to.

Eventually, in 1977, the milk firms did form the International Council of Infant Food Industries (ICIFI), which was one of the recommendations of the PAG Meeting in 1974. ICIFI laid down certain rules, one of which is that as breast milk is best for the baby, mothers should be encouraged to breast-feed their babies for as long as possible and the milk firms will refrain from practices which may hinder this aim. The time was therefore ripe for the establishment of the Singapore Committee on a more firm basis. The Ministry of Health was approached and meetings between the Ministry's representatives and the milk firms' representatives were convened to set up a code of ethics for the marketing of baby milk formulas. After lengthy discussions, the Code of Ethics on the Sale of Infant Formula Products in Singapore was finally agreed upon by both sides.

However, a code of ethics alone would not be workable unless the milk firms subscribing to the code submit themselves to being assessed by an Ethics Committee. Hence it was that the Sale of Infant Foods Ethics Committee, Singapore (SIFECS), was formed under the Ministry of Health. All firms dealing with infant formula products agreed to operate within the Code and to submit their printed advertising materials to be vetted by the Committee was formed within SIFECS, comprising representatives from the Ministry of Health.

The members of SIFECS, as constituted in July 1979, are as follows:

**1 Ministry of Health Representatives:**

Professor Wong Hock Boon,
Professor of Paediatrics, University of Singapore (Chairman)
Dr Tan Cheng Lim, Head, Department of Paediatrics, Singapore General Hospital, Ministry of Health
Dr Ho May Ling, Senior Registrar, Maternal and Child Health Services, Ministry of Health
Mr Chia Hong Kuan, Head, Food Section, Ministry of the Environment
Mrs Nolleen Lim, Representative from the Singapore Breast-feeding Mothers' Group
Mrs Tan Wei Ling, Public Health Nutritionist, Training and Health Education Department, Ministry of Health (Secretary)

**2 Milk Firm Representatives:**

| | | |
|---|---|---|
| Mr Dennis Khoo | — | Nestle |
| Mr Sim Paik Keng | — | Dumex |
| Mr Loh Chee Weng | — | Wyeth |
| Mr Daniel Wong | — | Cow & Gate |
| Mr Ho Soo Jin | — | Abbott |
| Mr Patrick Sim | — | Getz |

The history of the formation of SIFECS is unique in that a section of the "business world" has actively co-operated with the Government, on a voluntary basis, to observe certain rules in the promotion of their products, so as not to jeopardise the health of a section of the community, viz. human infants. It speaks very highly of the milk firm representatives, once their Head Offices had subscribed to the views of ICIFI, that the formulation of the Code of Ethics was a relatively smooth process. It is even more laudable on their part, that since the Code has been in operation for nearly a year, the milk firms have steadfastly adhered to the decisions handed down by the Vetting Committee of SIFECS.

With the establishment of SIFECS, no one can put the blame on the milk firms if the breastfeeding status in Singapore does not improve in the future. It behoves all doctors and other health personnel to work even harder to see that our infants receive their birthright, i.e. that they are given human milk for as long as possible. Health personnel can also help by ensuring that they as well as the milk firms observe the Code, whether

they are working in the Ministry of Health or in the private sector.

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**TABLE I. Possible sequelae of late onset rubella**

1. Infancy
   a) Chronic rubella rash.
   b) Interstitial pneumonia.
   c) Recurrent pulmonary infection.
   d) Chronic diarrhoea.
   e) Hypogammaglobulinaemia.
2. Childhood
   a) Sensorineural deafness.
   b) Central auditory imperception.
   c) Speech defects.
   d) Diabetes mellitus.
   e) Growth hormone deficiency.
   f) Hypothyroidism.
   g) Progressive panencephalitis.

**TABLE II: Possible abnormalities resulting from congenital rubella**

1. General — intrauterine growth retardation, extra-uterine growth retardation.
2. Cardiovascular lesions — pulmonary arterial lesions (e.g. hypoplasia, supravalvular stenosis, valvular stenosis, peripheral branch stenosis), persistent ductus arteriosus, myocarditis, myocardial necrosis, aortic stenosis.
3. Central nervous system — microcephaly, bulging fontanelle, brain calcification, active encephalitis, lethargy, mental retardation, hypotonia, irritability, unreactive late onset convulsion and meningitis, progressive panencephalitis, autism.
4. Ocular defects — cataract, pigmentary retinopathy, microphthalmia, glaucoma, cloudy cornea.
5. Auditory — sensorineural deafness, central auditory imperception, deafness with speech defects with or without mental retardation, delayed speech.
6. Visceral — hepatosplenomegaly, hepatitis and jaundice.
7. Haematological — neonatal thrombocytopenia with or without purpura, anaemia, leucopenia, dermal erythropoiesis (blueberry muffin syndrome).
8. Osseous — osteopathy, bony radiolucencies.
9. Pulmonary — interstitial pneumonia.
10. Immunological — chronic rubella rash.
11. Miscellaneous — adenopathy, thymic hypoplasia, recurrent or persistent infections, hypogamma-globulinaemia, chronic diarrhoea, growth hormone deficiency, diabetes mellitus, dermatoglyphic abnormality.

## FDA proposes tampon warning

US FDA has proposed that all tampon products should carry a warning statement following the recent research on the toxic shock syndrome (TSS), ***Far East Health,*** November 1980.

Tampax Inc. are conducting a single-handed battle against the proposal. Other public comments on the warning statement have been made but none by manufacturers. Tampax faces a falling tampon retail sales market and, unlike other tampon manufacturers, has no sanitary napkin product to fall back on.

Tampax is objecting particularly strongly to one sentence in the FDA's proposed warning: "You can almost entirely avoid the risk of getting this disease by not using tampons".

There is a possibility that the FDA might have overreacted to the TSS-tampon question, according to US Government's Centre for Disease Control, which is beginning research on the topic.

Research shows that 5 to 10 per cent have the suspect Staphylococcus aureus bacterium present in their vaginas. But probably it is only one of several dozen toxins derived from the bacterium that causes TSS. Many of the toxins are identified and none of the known ones causes TSS, according to CDC's latest research.

Procter and Gamble's net income has fallen 36 per cent in the first fiscal quarter as a result of the withdrawal of the Rely tampon.

The tampon was taken off the market after reports that they may be linked with toxic shock syndrome, a little-known but sometimes fatal disease, the incidence of which is growing in the US ***(Far East Health,*** Dec. 1980).

## Bangladesh starts drug manufacture

Later this year the People's Health Centre (Gonoshasthaya Kendra) at Savar in Bangladesh will begin producing its own generic pharmaceuticals.

After three years' work on feasibility studies and government clearances, the go-ahead was given for the GSK pharmaceutical plant in late 1978. The factory will begin processing a range of about 30 basic drugs and preparations such as aspirin, tetracyclin, penicillin, sulphacetamide, vitamin C, sterile water and oral rehydration salts.

The WHO, which has advised developing countries to establish locally-owned pharmaceutical units, has drawn up a list of 120 active ingredients which are considered essential to cover most of the current drug treatment needs, with only 50 being needed for rural primary health care work.

The factory has been set up to help develop national self-sufficiency in drug production and to establish the concept of service rather than profit as the motive of a modern efficient production unit. According to a report by Oxfam, which is assisting in the funding of the venture, eight multinational companies and their subsidiaries control 80 per cent of the drug market in Bangladesh.

## Society drives old people crazy?

**By Erlinda Bolido**

SOME old people may have been driven crazy by society.

Dr Alex Comfort, British researcher on aging and author of several books, has listed society as one of three reasons for old people's going crazy.

Dr Comfort said old people either go crazy because they have been so their whole lives, or they got ill and went crazy, or society drove them crazy. He singled out the "sociogenics" of aging as the most heinous culprit of all in society's demoralisation of the elderly. Myths about little old ladies in tennis shoes or old gents who are "bonkers" are far more damaging than the physical realities of aging, he said.

"We now know that intelligence does not decline with age, nor does learning. Even sexuality holds up better than the capacity to ride a bike or play a round of golf. In fact, most old people are nothing like decrepit. They are vigorous people who would rather be blown up by a volcano than die of old age," Dr Comfort said in a talk at Stanford University Medical Centre, Calif., U.S.A.

He noted that although the United States is apparently ahead of Britain in gerontology or the study of the biology of aging, Britain is more advanced in geriatric medicine — the delivery of health care services to those now old.

One of the aims of geriatric medicine, he said, is to tailor-make programmes to fit local needs. "Geriatric services should be geared to the residents in the area and they should be a part of the planning. Old people are the most aware of where existing services aren't working." He added that a major problem confronting old people is "gross overprescription" of drugs, particularly diuretics.

Dr Comfort believes that the teaching of geriatric medicine should be done by specialists, but the actual practice should come from a family practitioner.

"Just as there is a tendency to shunt old people out of the main-stream of society, there is a tendency to shunt geriatric medicine out of the mainstream of medicine into a geriatric ghetto," he said.

## Dr Pauling gets grant for cancer research

**By Nathan Horwitz**

PALO ALTO, California — After eight unsuccessful efforts to get research funding from the U.S. National Cancer Institute, Dr Linus Pauling, twice winner of the Nobel Prize, has received his first NCI grant.

The US$30,000 funding will cover a two-year study of vitamin C in preventing or inhibiting the growth of breast cancers in mice.

The effort required to obtain the grant offers a glimpse at the world of medical politics, where participants scramble for millions in research support controlled by granting committees. Control over who gets how much means tremendous power, and the committees are not reluctant to exercise it in support of their own views.

For example, vitamin therapy for cancer is not in line with current concepts of intensive, cancer-cell-killing drug therapy. As a result, Dr Pauling's views have up to now been coldly received, observers say.

His most recent attempt to gain funding was only beginning when, despite his previous success at explaining chemical bonding — an effort that earned him the 1954 Nobel Prize — Dr Pauling had to appeal an initial rejection of his current proposal to an NCI Advisory Board.

Then followed the appointment of a special review committee, an on-site visit to Dr Pauling's laboratories here and some intensive discussion, before the advisory board — in a split decision — voted to approve the special committee's unanimous recommendation for funding.

Dr Pauling has applied to NCI for grants — without success — for almost a decade. He declined in an interview to comment on the length of time it has taken him to get NCI funding but observed that, to his knowledge, this may be the first case in which the NCI Advisory Board has overruled a grant rejection.

The new NCI-funded animal cancer study is expected to get under way at the Pauling Institute of Science and Medicine here within the next few months.

In an interview, Dr Pauling said it is the fifth step in a series of studies of skin cancer in mice exposed to high doses of ultraviolet radiation that is believed to trigger cancer in humans.

The as-yet-unpublished research apparently demonstrates that in about 900 mice high doses of vitamin C "deferred the first appearance of a skin lesion and deferred the different stages of the lesion until death" or the end of the study, Dr Pauling said. "We now want to investigate a different animal model with a high incidence of breast tumour to determine the extent to which high doses of vitamin C are able to control the appearance of spontaneous tumour in these mice."

DR PAULING's views on vitamin C have been a centre of controversy since the late 1960s, when he proposed that large doses of vitamin C could prevent or lessen the symptoms of a cold.

In 1976, he and his Scottish collaborator, Dr Ewan Cameron, a cancer surgeon, reported that 100 terminal cancer patients who had been treated with large doses of vitamin C lived an average of 10 months longer than 1,000 subjects who had not received the vitamin.

## What should I tell patients about tampons?

***We recently asked several influential physicians this question:***
What advice would you give when patients ask, "should I stop using tampons?"
***Their answers are intended to give you a perspective on the current views surrounding the safety of tampons and whether the risk of developing toxic shock outweighs the benefits of their use.***

NICHOLAS FIUMARA, MD
*Director of Communicable and Venereal Diseases*
*Massachusetts Department of Public Health*
*U.S.A.*

A patient doesn't necessarily have to stop ... using tampons. If she changes them about every three hours, then the bugs won't have a chance to grow. At night time, she should use a napkin. This is a precaution until we know more. The problem with super-absorbent tampons is that they're kept in too long.

ARTHUR REINGOLD, MD
*Member, Toxic Shock Task Force*
*Centre for Disease Control*
*U.S.A.*

Stop, or use tampons intermittently ... if you wish to reduce the risk of developing toxic shock syndrome. It's an individual's choice, since the risk is low and benefits are great. But even though risk is low, the illness can be severe. It's a similar situation to birth control pills.

JEFFREY DAVIS, MD*
*State Epidemiologist*
*Wisconsin Division of Health, Madison*
*U.S.A.*

It's up to the patient ... basically, there are two things she can do. First, she can use tampons, just during the day and not at night, or at work and not at home, and avoid them when she sleeps, or she can eliminate tampon use. Any woman who wishes to use tampons and develops fever with vomiting or diarrhoea during a menstrual period should immediately discontinue usage and call a physician.

FRED FLEURY, MD
*Clinical Assistant Professor of Obstetrics and Gynaecology, Southern Illinois University School of Medicine*
*U.S.A.*

She can continue ... to wear tampons, especially during moderate to heavy days of flow. On the light days, perhaps it is unwise, and it's probably also unwise to use them simply to control vaginal secretion intermenstrually. A tampon sitting in there for great numbers of hours can dry the vagina beyond what's intended. But whenever a tampon is well moistened from menstrual fluid and is changed regularly, there isn't a problem.

CHRISTINE E. HAYCOCK, MD
*Associate Professor of Surgery, New Jersey Medical School, Newark*
*U.S.A.*

Don't wear a tampon that's too large ... to fit comfortably and relatively loosely in the vagina. In other words, it should be inserted gently without rubbing. And the tampon should be changed often enough so that there's a little absorbency left in it. If a woman uses tampons and has an underlying vaginal infection, she should get it taken care of.

*Dr Davis was among the first to connect toxic shock syndrome with tampon use.

*(from Modern Medicine of Asia. Vol. 17)*

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Pozenel, H. et al.: The antihypertensive effect of Lexotan (Bromazepam) a new Benzodiazepine Derivative. Paper, 10th European Conference on Psychosomatic Research, Edinburgh, 1974.

"Among the benzodiazepines with the most potent anxiolytic effect, Lexotan produces least sedation."

Pöldinger, N.: The Benzodiazepines; Mode of Action and Indications. Paper, Symposium on the Benzodiazepines, Athens, 1977.

"Goldstein concluded that the anxiolytic effect of Lexotan is more pronounced than that of other benzodiazepines."

Goldstein, N.: University Psychiatric Hospital, Montevideo. Ensayos clinicos con el preparado Lexotan en afecciones psicosomaticas. Rev. argent, Psicofarmacol. 1, 10-16 (1973).

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"Bromazepam appears, in our experience, to be superior to other benzodiazepine drugs in disorders based on obsessionality".

Cassano, G. B. et al: Bromazepam versus Diazepam in Psychoneurotic inpatients. Pharmakopsychiat. 1 (1975) 1-7.

"Obsessive neuroses improved under bromazepam treatment because this drug is more specific and has a more pronounced anti-anxiety effect than other benzodiazepines."

Burrell, B. H. et al: Use of Bromazepam in obsessional phobic and related states. Curr. Med. Res. and Op. Vol. 2 No. 7, (1974)

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Kerry, R. J. et al: A double-blind cross-over comparison of Bromazepam, Diazepam and Chlordiazepoxide in the treatment of neurotic anxiety. Psychosomatics, Vol. 13 pp. 122-124, March-April 1972.

"Lexotan was more often felt by both the patient and the physician to be better tolerated than lorazepam."

Modestin, J., Hodel, J.: Lorazepam versus Bromazepam. Kontrollierter Kreuzuntersuch. Münch. med. Wschr. 118, 1335-1336 (1976).

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Plavec, J.: Long-term treatment of patients with psychosomatic ailments with Bromazepam (Lexotanil). The 9th Congress of the International College of Psychosomatic Medicine, Kyoto, 1977.

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