

The Singapore Family Physician



ISSN 0377-5305

**The College of General
Practitioners Singapore
Vol. XIV No. 1
Jan/March 1988**

**Tried and tested
Voltaren
now also available
in a topical form**



[®]**Voltaren** [®]**Emulgel**

**a reliable help in painful
conditions of muscles,
joints, tendons, and ligaments**

Product Information

Presentation: Diclofenac diethylammonium (1%): fatty emulsion in an aqueous gel. **Indications:** For the local treatment of traumatic inflammation of the tendons, ligaments, muscles, and joints, e.g. due to sprains, strains, and bruises. Localised forms of soft-tissue rheumatism, e.g. tendovaginitis, shoulder-hand syndrome, and bursitis. Localised rheumatic diseases, e.g. osteoarthritis of peripheral joints and of the vertebral column. **Periarthopathy.** **Dosage and application:** Depending on the size of the painful site to be treated, apply 2 — 4 g (cherry to walnut size quantity) 3 — 4 times daily to the affected parts and rub in gently. **Contra-indications:** Known hypersensitivity to the active substance, to acetylsalicylic acid, or other non-steroidal anti-inflammatory drugs, as well as to isopropanol or propylene glycol. **Precautions:** Do not apply to skin wounds or open injuries. Avoid contact with the eyes or with mucous membranes. Not to be taken by mouth! **Side effects:** Occasionally skin rash or itching, redness, or smarting of the skin. **Pack:** Tube of 20g.

Geigy

Further information is available on request.

CIBA-GEIGY S.E. ASIA (PTE) LTD 4, Fourth Lok Yang Road, Singapore 2262

MAL/A002 VOL / 1087

The College of General Practitioners Singapore

11TH COUNCIL 1987-89

President	Dr Lee Suan Yew
Vice President	Dr Koh Eng Kheng
Censor-in-Chief	Dr Lim Kim Leong
Hon Secretary	Dr Soh Cheow Beng
Hon Treasurer	Dr Alfred W T Loh
Council Members	Dr Chan Cheow Ju Dr Paul Chan Swee Mong Dr Cheong Pak Yean Dr Henry Yeo Peng Hock Dr Yeo Siam Yam Dr Goh Lee Gan
Hon Editor College Journal	

BOARD OF CENSORS

Censor-in-Chief	Dr Lim Kim Leong
Members	Dr James Chang Ming Yu Dr Goh Lee Gan

ADMINISTRATION

Administrative Secretary	Ms Sonia Fam
-----------------------------	--------------

1) CONTINUING MEDICAL EDUCATION COMMITTEE

Chairman	Dr Soh Cheow Beng
Secretary	Dr Henry Yeo Peng Hock
Ex-Officio	Dr Koh Eng Kheng
Members	Dr James Chang Dr Cheong Pak Yean Dr Hia Kwee Yang Dr Ho Gien Chiew Dr Alfred W T Loh Dr Richard Ng Dr Omar bin Salleh

2) UNDERGRADUATE TEACHING COMMITTEE

Chairman	Dr Goh Lee Gan
Secretary	Dr Chan Cheow Ju
Ex-Officio	Dr Lee Suan Yew

Members

Dr Fong Ngan Phoon
Dr Patrick Kee
Dr Lim Lean Huat
Dr Wong Wee Nam

3) PUBLICATION COMMITTEE

Chairman	Dr Goh Lee Gan
Secretary	Dr Chan Cheow Ju
Ex-Officio	Dr Koh Eng Kheng
Members	Dr Patrick Kee Dr Leong Vie Chung Dr Moti H Vaswani Dr Wong Wee Nam

4) FINANCE COMMITTEE

Chairman	Dr Alfred W T Loh
Secretary	Dr Paul Chan Swee Mong
Ex-Officio	Dr Lee Suan Yew
Members	Dr Leong Vie Chung Dr Wong Heck Sing

5) RESEARCH COMMITTEE

Chairman	Dr Paul Chan Swee Mong
Secretary	Dr Fong Ngan Phoon
Ex-Officio	Dr Koh Eng Kheng
Members	Dr James Chang Ming Yu Dr Chong Tong Mun Dr Goh Lee Gan Dr Emmanuel Shanta Dr Yeo Siam Yam

6) COMMITTEE ON PRACTICE MANAGEMENT

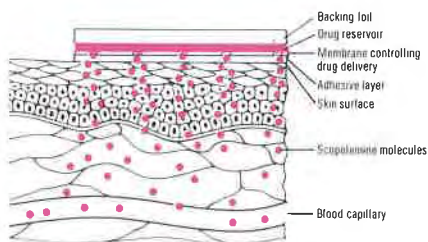
Chairman	Dr Henry Yeo Peng Hock
Secretary	Dr Cheong Pak Yean
Ex-Officio	Dr Lee Suan Yew
Members	Dr Goh Lee Gan Dr Kwan Kah Yee Dr Alfred W T Loh

NEW Scopoderm TTS



proven successful in the NASA space shuttle programme

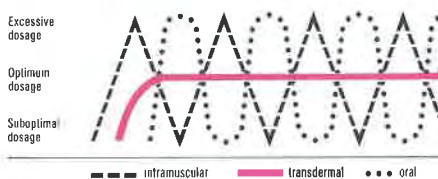
Three days protection from motion sickness with just one single application



Scopoderm TTS is a unique plaster designed to deliver — through the intact skin into the bloodstream — 0.5 mg of the 1.5 mg scopolamine contained in the system

Scopoderm TTS (Transdermal Therapeutic System)
ensures uniform plasma concentration as with a drip infusion

- **Convenient**
- **Effective**
- **Better tolerated**



Geigy

Further product information available on request from:
CIBA-GEIGY (M) SDN. BHD.
14 & 16, Jalan SS2/61, 47300 P. Jaya, Malaysia
CIBA-GEIGY S.E. ASIA (PTE) LTD
4, Fourth Lok Yang Road, Singapore 2262
A. BAUR & CO LTD.
P. O. Box 11, Colombo, Sri Lanka

**Stick a Scopoderm
behind your ear —
goodbye travel
sickness!**

THE SINGAPORE FAMILY PHYSICIAN

The College of General Practitioners Singapore
College of Medicine Building, Level 1 (Right Wing)
16 College Road, Singapore 0316.

Vol. XIV, No. 1 Jan/March 1988 Price to Non-Members S\$5.00 M.C.I. (P) No. 20/3/87

CONTENTS

	Page
The Eleventh Council	1
Editorial — Measuring Medical Manpower Adequacy	4
Career Development of Local Medical Graduates (1950-1983)	7
Health Promotion — A Singapore Experience	
Dr Razia Attaree	13
The High Risk Pregnancy: Identification and Assessment	
Dr K K Ho	16
Clinical Assessment of Fitness for Scuba Diving	
Dr C C Khong & Col (Dr) Jimmy How	20
A Case of Irritable Bowel Syndrome	
Dr Selina S L Lim	24
Acne Vulgaris — An Update in Management	
Dr Y C Giam	28
Opening Address: The College's Teaching Seminars	
Prof Lee Hin Peng	32
The College's Teaching Seminars	
Dr K L Lim	33
Family Medicine as A Discipline	
Dr L G Goh	35
X-ray Quiz	42
ECG Quiz	44
News from the Council	46

EDITORIAL

MEASURING MEDICAL MANPOWER ADEQUACY

In this issue of the Singapore Family Physician, Dr Paul Chan and members of the Research Committee of the College of GPs, Singapore reporting on the **Career Development of Local Medical Graduates (1950-1983)** recommended that a study and evaluation of the national medical manpower resources of Singapore be made taking into account both doctors in the private and public sectors. The report also indicated that the Doctor: Population Ratio in Singapore had improved to 1: 985.

In their **Draft Report on Primary Health Care in Singapore**, Dr Patrick Kee and his committee members of the Singapore Medical Association (SMA) Adhoc Committee on General Practice stated in paragraph 1 of Chapter 2 that,

"Private general practitioners in Singapore have historically no guidelines or policies to follow. There has never been a clear concept of their role or any uniformity of structure or organisation. Although certain patterns of general practice have evolved over the years, the only common denominator is perhaps that of a free entrepreneurial spirit operating within our laws."

In 1985, a former SMA president Dr GK Mah presented a Paper entitled **The Doctor in the Future** at the SMA Silver Jubilee National Medical Convention which cautioned the medical profession that Singapore could be heading towards the problem of a doctor surplus with its attendant undesirable consequences. He urged that a study of the relevance for Singapore of the European experience of having too many doctors for the past decade was "urgently required".

The past president of the Association of Private Medical Practitioners of Singapore Dr YC Wong writing in the association's newsletter in February 1985 on **Excess Doctors in**

the Private Sector felt that the World Health Organisation (WHO) recommendation of a doctor: patient ratio of 1: 800 for Singapore must be examined in relation to its local context. He went on to say that, "In urbanized Singapore, one doctor can geographically serve a much higher number of patients than could a doctor in a vastly rural country".

The presence of traditional practitioners of medicine in Singapore was a factor that had to be brought into the formulation of the doctor: patient ratio, he added. He also cautioned against the flooding of Singapore with "an excess of private medical practitioners without careful evaluation of the special relationships of private medical practitioners to market forces". This he predicted "may encounter an unexpected problem with no ready solution".

The message is clear. The study by Dr Paul Chan and members of the College of GPs Research Committee, the Draft Report on Primary Health Care in Singapore by Dr Patrick Kee et al, the paper presented by Dr GK Mah and the presidential view of Dr YC Wong all indicated the need to study the medical needs of Singapore vis-a-vis whether or not there is a surplus of doctors, where the surplus lies (primary health care or specific areas of specialties), the negative consequences of such surplus on the quality and cost of patient care and whether market forces should be the sole determinant in assuring the nation of cost-effective medical care.

Doctor Adequacy

Although the concept "adequacy of doctors in a country" is a complex concept that is not easily measured, there is a need to address the problem before it addresses us. A review of the literature has shown that a variety of methods have been used to evaluate

adequacy of doctor supply. Although each method by itself is inadequate, collectively they provide the necessary lens components to permit both a micro as well as a macro view.

These methods are identified as:-

- * doctor: population ratio;
- * measuring doctor accessibility;
- * professional and community satisfaction;
- * econometric analysis and
- * professional standards approach.

Doctor: Population Ratio

This is the most easily computed index but suffers from being the most unsatisfactory measure.

As has been pointed out earlier, this index does not take into consideration that there are traditional practitioners (Chinese, Indian and Malay systems of medicine) serving the population who are not defined as "doctors" and are excluded from the index.

The index also does not take into account the density of population within a defined geographical area and the productivity of the doctor. Singapore has a finite land area with an excellent network of roads and easy accessibility of transport. Getting to a doctor's clinic is a cinch. The International Labour Organisation Yearbook of Labour Statistics 1986 revealed that Asian workers worked harder and longer hours than their counterparts in the western democracies. Without the need to feel abashed, the average doctor in Singapore is even more hard working than the model worker in any economic sector of Singapore's workforce. He works twice as hard and long for an income that is perhaps only half as much as his counterpart in the west. Is the WHO recommendation for Singapore realistic?

Measuring Accessibility

This measures whether patients can see the doctor when and where they wish. Accessibility to doctors depend on whether doctors accept new patients, the distance between patients' homes and the doctors' clinics, lead time required for appointments, waiting time in the clinic before being seen, clinic hours in terms of patients' convenience and the amount of time doctors devote to patients. In

Singapore it is no exaggeration to say that private doctors have to wait for their patients rather than the other way round because of the mushrooming of clinics, both public and private, within the vicinity of housing estates. Accessibility of doctors to patients in Singapore is immediate. If he had to wait for longer than 10 minutes, the patient would in all probability make his absence felt.

Professional and Community Satisfaction

Attitudinal surveys are used to measure the community's degree of satisfaction with existing doctor supply. Similar surveys are conducted among the providers of medical care. When both public and doctor population are satisfied, the conclusion would be that the supply of doctors is adequate.

If such a survey was conducted among the population with regards to doctor supply in the public institutions the attitude could be biased towards "inadequacy". Similarly public institutional doctors would feel that their institutions were inadequately staffed. The reason for an "inadequate" attitude is not difficult to understand. Each patient attending outpatient treatment in the public sector is subsidised to the extent of five Singapore dollars per attendance. Subsidised medical care naturally attracts large crowds of patients with the inevitability of a longer waiting time before being attended to, a shorter without frills clinical examination and another round of waiting time to obtain medications. All these may be construed as "inadequacy" of doctors.

From the point of view of the private doctors, many can do with a larger patient population. When specialist doctors have to undertake primary health care to supplement their income or to practise lateral referrals amongst themselves, testimony to professional dissatisfaction has been proven.

Econometric Analysis

The adequacy of doctor supply can be analysed by determining the relationship between doctor supply and doctor income. This may be conducted by comparing "relative income" i.e. evaluating doctor's income with the income of other professionals. When the doctor's income falls relative to the income of other professionals

there is an unhealthy oversupply. When the "relative income" of doctors is higher than that of other professionals inadequacy of supply is obvious.

Another analysis is by way of computing "rate of return to medical education". Medical education is an investment in human capital and doctor's income is considered as a return on that investment. A high return would indicate "inadequacy" of supply just as a poor return would indicate "surplus".

Professional Standards Approach

Of the many methods to measure adequacy of doctor supply, the only method which is regarded as truly normative is the "professional standards approach". This method was originally developed by Lee RI and Jones LW in 1933 in their publication "The Fundamentals of Good Medical Care". The approach requires the following information:-

1. The frequency of each type of illness in a given population;
2. The recommendations of a panel of experts with regard to amount and type of health services needed to treat each type of illness;
3. The amount of time (assessed by the

experts) required to be expended in each type of service; and

4. The average amount of time different types of care providers spend in patient care.

The basis of this method is the dependence on epidemiological "needs" for health care rather than a reliance on "demand" and expectation".

The major defects in this method are the requirement to project the need for doctors at some time in the future, the complex information required of "experts" and the arbitrary assumption of future trends in the prevalence of disease and treatment.

The Book of Ecclesiastes reveals that "There is a time for everything and a season for every activity under heaven." It goes on to remind readers of the pendular swing of life and activities. When we are at one end the surge is to the other end. Perhaps we have reached one end of the pendulum in doctor supply and we should be swinging to the opposite end. If we fail to recognise or appreciate that we are at one extreme then we may overswing with unfortunate results.

LVC

CAREER DEVELOPMENT OF LOCAL MEDICAL GRADUATES (1950 TO 1983)

Research Committee* — College of GPs, Singapore

INTRODUCTION

The first medical school in the Singapore-Malayan region was founded in Singapore in 1905. It was then known as the King Edward VII College of Medicine. Its first batch of doctors graduated in 1911 with the Licentiate in Medicine and Surgery (LMS). It was not until 1950 that medical graduates were awarded the degrees of Bachelors of Medicine and Surgery (MB, BS) to reflect the granting of university status to the King Edward VII College of Medicine which then became the Faculty of Medicine, University of Malaya in Singapore. The University of Malaya in Singapore became the University of Singapore in 1962 as a result of new political developments between the two countries. In 1980 the University of Singapore became the National University of Singapore. Medical graduates whether from the King Edward VII College of Medicine, the University of Malaya in Singapore, the University of Singapore or the National University of Singapore shall be referred to in this study as local medical graduates. The successive changes in the names of the institutions shall collectively be referred to as the local medical school.

The career development of medical graduates from the local medical school has remained uncharted and obscure so far. This study sets out to examine what careers local medical graduates have carved out for themselves. The years between 1950 to 1983 are chosen because the bulk of our registered practitioners is drawn from this period. This period is also useful as a link between the present and the future. The following data is sought:-

1. The number of local medical graduates remaining and practising in Singapore.

*Members: Dr Paul S M Chan (Chairman)
Dr James M Y Chang
Dr T M Chong
Dr L G Goh
Dr K H Goh
Dr S Emmanuel

2. Of those who remain and are practising,
 - (a) the number who have become General Practitioners (GPs) and
 - (b) the number who have become specialists and the specialities they are in, and
 - (c) the number who remain in government service, and the reasons thereof.

Materials and Methods

We used the Singapore Government Gazette's "List of Registered Medical Practitioners for 1985" as our main reference source.

Excluded from the above gazette were the following groups of listed medical practitioners:-

- (i) all practitioners from the local medical school prior to 1950.
- (ii) all provisionally registered medical practitioners for 1984 who are house-officers as our study period ends in 1983.
- (iii) all practitioners who had graduated from foreign medical schools.

These exclusions were done to facilitate data collection and analysis by confining the study to a select group of doctors graduating from a common medical school and within a specific time-frame.

A data base was created using a computer programme called dBase 11, and the following data were fed into a personal computer:

- (i) the practitioner's serial number as listed in the Gazette,
- (ii) the practitioner's year of graduation with MB, BS (the basic medical degree),
- (iii) the practitioner's current job status or postgraduate qualification.

Codes were assigned for each clearcut category of medical practice. All in all there were 23 such codes. Due to the nature of the information contained in the Gazette, a

breakdown of the number of practitioners in the major sub-specialities was not possible.

Limitations

The accuracy of the data in the study depends on the information contained in the 1985 Singapore Government Gazette of registered practitioners. Minor inaccuracies may result from failure of a few registered practitioners to update the following information into the gazette regarding: their latest postgraduate qualifications, their resignations from Government Service to go into private practice or even their whereabouts as some may have migrated or gone overseas for further study.

The other problem concerns graduates with specialist qualifications in Internal Medicine, Paediatrics, Occupational Medicine or Public Health who have opted to practise in the private sector as GPs. It is difficult to decipher this information from the gazette. Hence such practitioners have to be classified as specialists and not as GPs.

Results

Of the 2,460 registered medical practitioners in the 1985 Government Gazette, there were 1,769 graduates from the local medical school for the period 1950 to 1983. They form 71.9% of the total. 28.1% or 691 of the remaining practitioners were graduates of foreign medical schools and graduates from the local medical school prior to 1950. Also listed in the

gazette but not included in the study were another 136 provisionally registered medical practitioners undergoing their housemanship year of training in 1984 before they could be eligible for full registration status in 1985.

The results of our analysis are:-

(1) MBBS Graduates remaining in Singapore

Table 1 shows on a cumulated basis, the number of registered practitioners at the material time of this study practising in Singapore. They form 60.2% (1,769/2,937) of the total number of graduates produced by the local medical school from 1950 to 1983.

The Table shows an increase in the annual output of medical graduates from the local medical school over the years from 1950. When the 15-year period from 1950 to 1964 is compared with the 34-year period from 1950 to 1983, the percentage of medical graduates listed in the 1985 Singapore gazette and currently practising in Singapore, has risen from 38.9% to 60.2%; whilst MBBS graduates not listed in the 1985 gazette for these two periods has fallen from 61.1% to 39.8%. These graduates not listed in the gazette refer mainly to the large numbers of Malayan students who had come to study medicine in Singapore since it was the site of the only medical school in the Singapore-Malayan region prior to 1962. This arrangement could not last. With Malaya's independence in 1957; the formation of Malaysia incorporating Singapore, Sabah and

TABLE 1: NO OF MBBS GRADUATES LISTED IN THE 1985 SINGAPORE MEDICAL GAZETTE OUT OF TOTAL GRADUATED BETWEEN 1950 TO 1983

Year of Graduation	Listed		Not listed		Total Drs Produced
	No	%	No.	%	
1950-54	81	45.5%	97	54.5%	178
1950-59	178	42.3%	243	57.7%	421
1950-64	311	38.9%	488	61.1%	799
1950-69	550	41.3%	781	58.7%	1,331
1950-74	982	47.4%	1,002	52.6%	1,904
1950-79	1,264	51.7%	1,181	48.3%	2,445
1950-83	1,769	60.2%	1,168	39.8%	2,937

Sarawak in 1963; and the separation of Singapore from Malaysia in 1965, the future was set for both countries to be responsible for their own medical manpower needs and training. With the setting up of its first medical school in 1963, Malaysia has since added two more.¹ Hence fewer Malaysians need to come down to Singapore for their basic medical education. The original King Edward VII College of Medicine has finally completed its historical evolution to become the national medical school of Singapore today.

(2) Career Choices of MBBS graduates remaining in Singapore

Table 2 summarises the career choices of local medical graduates remaining in Singapore from those graduating in each 5-year period from 1950 to 1979. Data from the 4-year period from 1980 to 1983 is included for its usefulness with regard to the career preferences of more recent graduates from the local medical school.

From the above Table, the following findings can be made with regard to:-

(a) General Practitioners

General practitioners form one-third of the total number of graduates remaining in Singapore from 1950 to 1983. Reasons for the % drop of graduates entering general practice

in the 4-year period from 1979 to 1983 will be given later.

(b) Specialists

Specialisation for each five-year period from 1950 to 1979 varies between a high of 48.4% for the period 1955 to 1959 to a low of 27.6% for the period 1975 to 1979. In this table specialists are defined as MBBS graduates with higher qualifications acceptable to the Singapore Medical Council. Though this definition is not perfect it is difficult otherwise to define who are specialists and who are not based on the information as contained in the present gazette. It is also interesting to note that the number of specialists for the three periods (1955-1959), (1960-1964) and (1965-1969) exceeds the number of GPs. Reasons would be given later for the 0.0% of specialists produced for the period 1980 to 1983.

Table 3 is a summary of graduates from the local medical school who are listed in the 1985 Government Gazette and their career choices in the various specialities.

The most popular choice of local medical graduates are the M Med (Internal Medicine) degrees or their equivalent. The next two choices are the M Med (Surgery) and the M Med (Obstetrics & Gynaecology) degrees and their equivalents. Ranking 4th and 5th are the

TABLE 2: DISTRIBUTION OF LOCAL GRADUATES BY NATURE OF PRACTICE

Year of Graduation	GPs		Specialists		Govn. MOs		Others**		TOTAL 100%
	No.	%	No.	%	No.	%	No.	%	
1950-1954	38	(46.9%)	36	(4.5%)	4	(4.9%)	3	(3.7%)	81
1955-1959	39	(40.2%)	47	(48.8%)	5	(5.2%)	6	(6.2%)	97
1960-1964	54	(40.6%)	55	(41.3%)	21	(15.8%)	3	(2.3%)	133
1965-1969	99	(41.4%)	102	(42.7%)	25	(10.5%)	13	(5.4%)	239
1970-1974	158	(44.9%)	149	(42.3%)	35	(9.9%)	10	(2.9%)	352
1975-1979	133	(36.7%)	100	(27.6%)	110	(30.4%)	19	(5.3%)	362
1980-1983†	94	(18.6%)	0	(0.0%)	401	(79.4%)	10	(2.0%)	505
TOTAL:	615	(34.8%)	489	(27.6%)	601	(34.0%)	64	(3.6%)	1,769

Notes: * includes specialists in both Government, University and Private Sector.

† figures available for a 4-year period only.

** "others" refer to MOs in National University of Singapore, Private Hospitals and those whose job status could not be clarified.

**TABLE 3: CAREER CHOICES OF SPECIALISTS
FROM 1958 TO 1983**

Type of Speciality:	Nos	%
Internal Medicine (M. Med or Equiv.)	129	26.4
General Surgery (M. Med or Equiv.)	73	14.9
Obst. & Gynaecology (M. Med or Equiv.)	72	14.7
Paediatrics (M. Med or Equiv.)	48	9.8
M Sc (P. Health/Occ. Med.)	33	6.8
Anaesthesiology	32	6.5
Psychiatry	21	4.3
Radiology (diag./therapeutic)	20	4.1
Pathology/Laboratory Med.	18	3.7
Orthopaedic Surgery	16	3.3
Ophthalmology	16	3.3
ENT surgery	7	1.4
Others (rehab./aviation med)	4	0.8
Total No. of Specialists:	489	100.0%

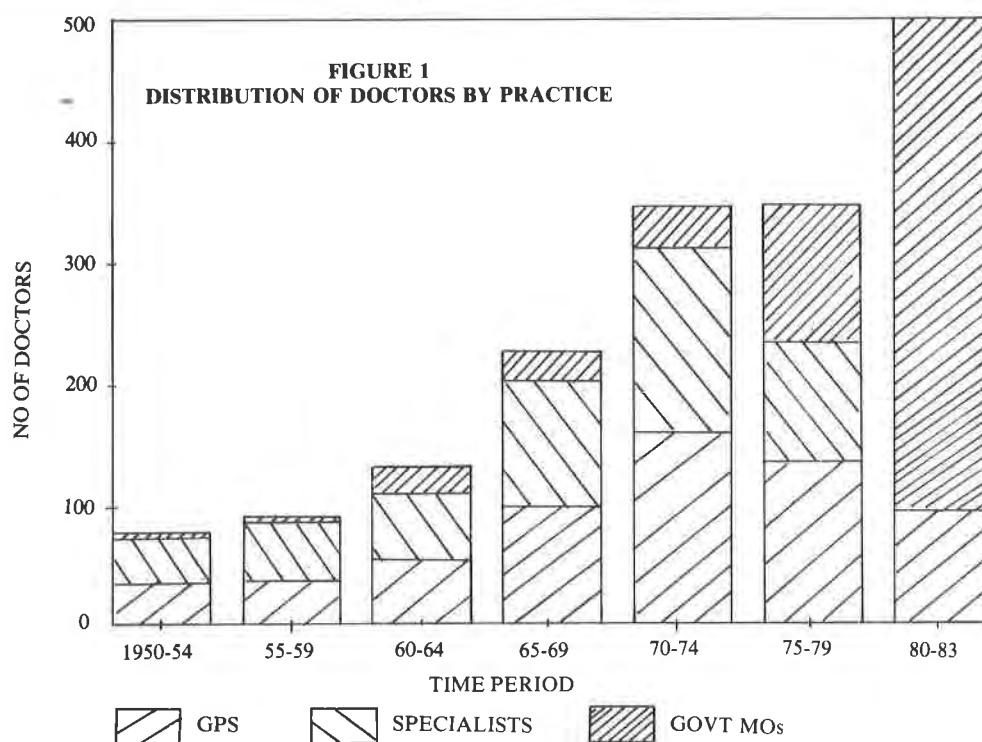
M Med (Paediatrics) and M Sc (Public Health/Occupational Medicine) degrees or their equivalents. These five choices account for 72.6% of specialisation achievements. The fact that they are awarded locally may be a factor accounting for their preponderance.

(c) Government Medical Officers

Government Medical Officers (GMOs) are defined here as practitioners with MBBS degrees and who work in the Government Medical Service or the Singapore Armed Forces. These GMOs referred to previously in Table 2 are compared with the numbers of GPs and Specialists produced over the years from 1950 to 1983 in Figure 1.

It shows the following:-

- (i) a phase covering the period from 1950 to 1974 where the numbers of GPs and Specialists are much greater than those becoming GMOs. GMOs only account for 10.0% of all local medical graduates currently practising in Singapore as compared to 43.0% and 43.1% of these graduates becoming GPs and Specialists respectively over this period of time. The data also show that by the 10th year after graduation, most local medical graduates



have completed their career development on whether to specialise, to become GPs or to stay in government service.

- (ii) a second phase covering the period 1975 to 1983 where the number of GMOs begins to rise rapidly compared to the numbers who have chosen to specialise or become GPs in private medical practice. The figures show that of the medical students graduating MBBS and practising in Singapore during the periods 1975 to 1979 and 1980 to 1983, 30.4% and 79.4% respectively of these practitioners remain in government service as compared to 36.7% and 18.6% of these graduates becoming GPs respectively. The number of specialists also decline from 27.6% to 0.0% over these two periods of time. The preponderance of practitioners from the graduating classes of 1980 to 1983 remaining in government service may be accounted for by the following factors:-

- the career developments of most of these younger medical graduates have not been completed.
- the greater output of medical graduates from the local medical school as shown in Table 1 in recent years.
- the introduction of various traineeship schemes to encourage newly qualified graduates to specialise. It takes an average of 3 to 5 years before an MBBS graduates could obtain a specialist degree. This is why there were no specialists produced from 1980 to 1983.
- the requirement for newly-qualified male medical graduates to do their National Service in the Singapore Armed Forces for 2 years. This was first started in 1971.
- the desire to acquire a greater number of postings in the surgical and medical disciplines that are deemed to be useful by those graduates intending to go into private practice as GPs. This explains why the number of GPs in this period is less than in those practitioners who had graduated earlier.
- the greater availability of positions, promotional prospects, pay increases and various incentives implemented by the Government in this period.

- a greater awareness of the competitive nature of a career in the private sector where success is not guaranteed. A specialist or a generalist faces the same risks. It is hoped that success could perhaps be made more certain by acquiring greater clinical competence through adequate hospital training of a few years' duration.

DISCUSSION

Out of a total of 1,769 medical graduates produced by the local medical school for the period 1950 to 1983, 615 or 34.8% are General Practitioners; 601 or 34.0% are Medical Officers in government service — civil and military; 489 or 27.6% are specialists, and 64 or 3.6% do not fit into the 3 well defined groups.

The distribution of these graduates in the 3 well defined groups varies from each 5-year period to the next. For the period 1980 to 1983 more medical graduates remained in government service than for any other period of time. Some of the reasons for their remaining in service have been given above.

We consider medical officers in government service as the backbone in the efforts to develop Singapore as a centre of medical excellence in this part of the world. It is from this pool of doctors that future general practitioners and specialists will emanate. Career development of this pool of medical graduates calls for the highest priority in medical manpower resource management. Whether as general practitioners or specialists they help to achieve our professed goal of excellence at all levels of medical services in our country.

As shown in Table 3, the distribution of specialists in the various specialities appears uneven. For example the number of ophthalmologists and ENT surgeons are small compared with the numbers of graduates with specialist qualifications in internal medicine, paediatrics, general surgery, obstetrics and gynaecology. Measures have already been taken by the authorities towards a better system of training doctors to meet the future demands for more sophisticated health care in all the major specialities and sub-specialities.

Population figures² show Singapore has 2,558,000 people at the end of June 1985. The total number of doctors including house-officers listed in the Singapore Medical Gazette dated 16/8/85 is 2,956. Our doctor-population ratio is therefore 1 to 985. The steady increase in the number of doctors yearly against a background of slowly growing and ageing population due to a "decline in fertility to below replacement levels from 1975"³ would mean a further decline in our doctor-population ratio in the future. Perhaps the time has come for us to be concerned about the optimum utilisation of our doctors. If planned properly now, there is no reason why the career development of present and future doctors should not be turned to good use to enhance the nation's health and prosperity.

Acknowledgements

We thank the following for their kind assistance: Mrs H Chen, Faculty of Medicine, National University of Singapore, for supplying us with the figures on the number of graduates per year from 1950 to 1983; Dr Leong Vie Chung and Dr Lee Suan Yew, College President, who first mooted the idea that formed the basis for this study.

REFERENCES

1. V Thuraisingham: Editorial on Medical Education and Standards. *Med J Malaysia* Vol 40 No 3, Sept 1985.
2. Chief Statistician, Department of Statistics, Singapore.
3. S H Saw: The Dynamics of Ageing in Singapore's Population. *Annals, Academy of Medicine, Singapore*, Vol 14, No 4, Oct 1985.

HEALTH PROMOTION — A SINGAPORE EXPERIENCE

Dr Razia Attaree
MBBS (S'pore)

*Primary Health Division
Ministry of Health
Singapore*



A nurse demonstrates the amount of tar collected in the lungs by burning one cigarette.

INTRODUCTION

In the past when infectious disease was the predominant cause of illness and death, health was defined in terms of the absence of diseases. By the middle of this century health had come to mean more than simply not being ill. It was then defined as a state of complete physical, mental and social well-being.

Today we are working with a concept which portrays health as a part of everyday living. In many developed countries 'wellness' is pursued as an achievable state of health. 'Quality of life' in this context implies the opportunities to make choices and to gain satisfaction from living. This view emphasizes the role of individuals and communities in looking after themselves.

Health Education, to-day, promotes self-care and self help. The focus of health education is on all people (the well and the sick) and on choices. It aims to provide accurate health information, instill positive health attitudes and to encourage people to make the right choices in order to improve their health status. It, therefore, has an influence on peoples' behaviour.

Health Education is conducted in clinics and hospitals in schools and in community centre. It is, also, conducted in workplaces as the workers form a captive audience with a similar educational background and health needs.

Employers want healthy and productive employees. They use pre-employment medical

checks to screen out medically suspect candidates. Once assured of the job few employees would strive to keep healthy and fewer employers would pay for anything more than curative services. There have been, however, some employers who have taken the lead and promoted healthy living e.g. regular exercise, eating wisely, non-smoking etc. knowing full well that a healthy worker is an asset to the company.

It was with this aim in mind that the training and Health Education Department, Ministry of Health worked with Singapore Airlines to help its employees understand certain health problems on the assumption that engaging in such processes will lead to behaviour more conducive to health.

A Needs Analysis

A pre-programme survey was done on 4,825 employees of the company. 1,044 employees (21.6%) were found to be smokers. This is higher than the national smoking rate of 19.6%. Age and sex specific smoking rates were not determined. A certain division in the company had a higher smoking rate of 33.5% probably due to a higher M:F ratio. Another division in the company had a smoking rate of 22.7% probably due to high availability of cigarettes and peer and social pressures.

Objectives

A non-smoking campaign was, thus, planned. The objectives were to:

- 1) inform the employees of the health hazards associated with smoking
- 2) create an awareness of the harmful effects of passive smoking
- 3) motivate smokers to quit smoking
- 4) promote non-smoking areas in the workplace (non-smoking was already enforced in areas where there was a fire hazard)

The Programme

All strata of the massive workforce were to be reached. Hence a "Non-Smoking Task Force" was formed with representatives from each division/section of the company and the Training and Health Education Department, Ministry of Health. 3 ex-smokers were also in the task force. The chairman of the Task Force was an ex-smoker. A special slogan was

created for the campaign, and intense in-house publicity was conducted for one month, prior to the campaign.

A week long campaign was held in July 1985 and a range of activities were chosen to help reach all sectors of the workforce e.g. exhibition, audio-visual shows, competitions etc. Staff were given time off to attend the programme and were provided transportation to the exhibition site if required.

Management support was highly visible throughout the programme and attendance of the employees was high. A "Smoke-out day" was also held when all smokers were encouraged not to light up and the sale of cigarettes was banned. Health awareness was thus created outside the precincts of the company clinic. During the exhibition, doctors from a voluntary organisation were also at hand to counsel smokers motivated to give up the habit.

Outcome

During the week long campaign, another survey was conducted. 5,000 questionnaires were distributed. 1,045 (21.5%) employees responded to this survey. Of the respondents, 251 (24.4%) were smokers. Of these smokers, 144 (70%) indicated they would try to quit smoking. Also of the 1,045 respondents, 96% agreed that smokers should not smoke in "no-smoking areas".

Follow up

Smoking has been banned permanently in the conference/meeting/lecture/interview rooms, recreation centre and the library, after the campaign.

Owing to the demand created, a 5-day smoking cessation clinic was conducted at the worksite from 27 Jan-31 Jan 1986. The programme was conducted by 2 doctors and included talks, filmshows, demonstrations, discussions and distribution of educational materials. 18 employees of the company completed the 5-day course, all 18 quit smoking, at the end of the course. Ten months later on 1 Dec 86 a National Smoking Control Programme was launched. Self-help kits and smoking cessation programmes were offered to all workplaces. In February 1987, the 18 persons who quit smoking in January 1986

were contacted. It was encouraging to note that they had managed to remain non-smokers one year later.

The Company Doctor's Role

In Singapore lung cancer is the leading form of cancer and coronary heart disease is the leading cause of death. Smoking is an indisputable risk factor in these and other chronic illnesses. Also the number of deaths due to smoking related diseases is continuing to rise.

Doctors and nurses can play an important role in helping patients quit smoking. A study

in Oxford has shown that the advice from a General Practitioner, supported by a leaflet, increased by 50% the success rate of patients trying to stop smoking. The captive audience in the workplace gives the company doctor a unique opportunity to identify, motivate, counsel and follow up smokers (ill or otherwise), individually or in groups. Workbased smoking cessation clinics would provide opportunities for reinforcement, feedback and follow up. The presence of groups of persons with similar backgrounds, attitudes and practices can be influential in providing peer group support for change and in encouraging a sustained quit status.

THE HIGH RISK PREGNANCY: IDENTIFICATION AND ASSESSMENT

Dr K K Ho
MBBS, MRCOG

INTRODUCTION

A high risk pregnancy is one in which the mother, foetus or newborn is or will be in a state of increased jeopardy. High risk pregnancies are found in 10-20% of the obstetric population, but account for 60-70% of perinatal deaths.

Identification of patients who are at risk and providing specific care necessary to prevent death or damage to both the mother and her foetus is the primary aim of obstetric practice.

IDENTIFICATION OF RISK FACTORS

At the first antenatal visit, a detailed history, careful physical examination and basic laboratory screening tests are essential for establishing the baseline condition and the identification of risk factors in pregnancy. Further specific investigations e.g. glucose tolerance test, thyroid function test and ultrasonography should be performed when warranted.

Some risk factors are apparent at the beginning of pregnancy, e.g. elderly primigravida, hypertension and previous Caesarean section. Other risk factors can only be diagnosed during the course of pregnancy e.g. antepartum haemorrhage and multiple pregnancy. Constant vigilance is therefore required throughout the entire antenatal period as failure to identify the risk factors may lead to inappropriate management.

RISK FACTORS IN PREGNANCY

1. General Factors

i Age

Teenage mothers are often more prone to pre-eclampsia and premature

labour.¹ Their antenatal care is usually fragmented due to poorer socioeconomic background. After the age of 35, problems such as hypertension, diabetes and uterine fibroids may appear or worsen during pregnancy and the risks of congenital abnormalities in the foetus especially Down's syndrome (1% at the age of 40) increased rapidly with maternal age.

ii Height

The size of the pelvis is usually related to a woman's height. There is an increased risk of cephalo-pelvic disproportion in the patient who is less than 150 cm.

iii Weight

Babies of underweight mothers tend to be premature with subsequent delay in neurological development and growth.² Whereas obese mothers are more prone to hypertension, diabetes mellitus and produce large babies who may require operative delivery.³

2. Past Obstetric History

i Parity

Primigravidae are a group whose childbearing capacity has never been tested. They are associated with an increased incidence of pre-eclampsia, suspected cephalo-pelvic disproportion, prolonged pregnancy, prolonged labour and forceps delivery. On the other hand, grand-multiparae (those who have had 5 or more deliveries) tend to be associated with different problems including foetal malpresentation, unstable lie, antepartum haemorrhage, anaemia and

malnutrition. They are also susceptible to postpartum haemorrhage.

Habitual (Recurrent) Abortions

The risk of spontaneous abortion in a pregnancy increases with the number of previous abortions. The chances of continuing a pregnancy after having had one, two and three abortions are estimated to be 76%, 74% and 68% respectively.⁴ The main known causes of recurrent abortions are foetal abnormalities, congenital uterine abnormalities, cervical incompetence and uterine fibroid.⁵

iii *Previous Low Birth-Weight Infant*

All babies born weighing less than 2270 gm are considered low birth weight. The incidence is 5-10% of all pregnancies, but it contributes to 50% of all deaths during the first week of life. There is an increased risk of recurrence in those patients who have had low birth weight infants.⁶

iv *Previous Caesarean Section*

In patients who have had previous Caesarean sections there is an increased likelihood of a repeat operation which carries a maternal mortality rate of 0.08%. This risk is to be weighed against the risks of vaginal delivery in which the caesarean section scar may rupture (1.2%) and foetal death (12.5%) if rupture occurs.⁷

v *Pre-Eclampsia*

In patients who have had pre-eclampsia there is 35% chance of recurrence and 22% chance of foetal growth retardation in subsequent pregnancies.⁸

vi *Previous Perinatal Death*

A previous perinatal death (stillbirth or neonatal death) increases the risk to subsequent babies by 2.5 to 6 times.⁹ The main causes of perinatal death are prematurity, congenital malformation, hypoxia and respiratory distress syndrome.

vii *Congenital Malformations*

Most congenital malformations can be classified into four main groups: chromosomal abnormalities (e.g. Down's syndrome); genetic disorders (e.g. achondroplasia); multifactorial conditions (e.g. anencephaly) and environmental disorders (e.g. congenital rubella syndrome). It may be possible to estimate the risk of the foetus developing the disorder if the nature of the congenital malformation of the previous pregnancy is known.

3. **Medical Disorders in Pregnancy**

Medical conditions including hypertension, diabetes mellitus, anaemia, thyrotoxicosis and various cardiac and renal diseases interact with the pregnant patient and her foetus in a complicated manner.

The medical disorders may deteriorate as the pregnancy advances and maternal complications may develop. The foetus has an increased risk of congenital abnormalities, prematurity, growth retardation and intra-uterine death. The risk is usually related to the severity, duration and control of the maternal medical conditions.

The pregnancy is often terminated prematurely either spontaneously as a complication of the pregnancy, or iatrogenically in order to stop further deterioration of the maternal condition or to prevent intra-uterine death.

4. **Complications Related to Pregnancy**

i *Bleeding*

Bleeding per vaginum in early pregnancy is common. There is 25-30% chance of threatened abortion proceeding to miscarriage.

Bleeding after 28 weeks of pregnancy (antepartum haemorrhage), can be due to placenta praevia, placenta abruption or indeterminate causes. It becomes an obstetric emergency if the bleeding is severe and may lead to perinatal or maternal death.

ii *Prolonged Pregnancy*

In the absence of complications, pregnancy is usually allowed to continue till the end of 42 weeks of gestation, after which the risk rises rapidly because the degenerating placenta is not able to cope with the increasing demand of the growing foetus.

iii *Uncertain Dates*

About 20% of pregnant patients are not sure of their last menstrual period. Knowing the gestation is important, as many decisions such as induction of labour and elective Caesarean section depend on the maturity of the foetus. Fortunately, early clinical examination and ultrasonography would give a fairly accurate assessment of the period of gestation, but much less so in late pregnancy.

iv *Multiple Pregnancy*

Both the mother and the foetuses are at jeopardy in the presence of multiple pregnancy. The mother is prone to pre-eclampsia, anaemia due to greater foetal demand, placenta praevia due to larger placenta and premature labour due to over distension of the uterus. The foetuses are likely to be premature, abnormal, growth retarded or in malpresentation.

v *Uterus Smaller/Larger than Dates*

A uterus which is smaller than expected is commonly attributable to wrong dates or long menstrual cycles or more sinister causes such as intra-uterine growth retardation and congenital abnormalities. On the other hand, a larger uterus may be due to a big foetus, multiple pregnancy, polyhydramnios or the presence of a pelvic tumour.

vi *Breech Presentation and Abnormal Lies*

About 15% of singletons present by the breech at 32 weeks.¹⁰ The majority undergo spontaneous version to head and only 2-3% of them persist as breech presentation at delivery. Breech presentation has an

overall mortality of 25.6% compared with 2.6% for non-breech presentations.¹¹ Beside congenital malformations and prematurity, asphyxia due to delay in delivery or cord prolapse, trauma due to various manipulations, contribute towards the high perinatal mortality. Patients with foetus in transverse or oblique lie are predisposed to similar risks.

vii *Premature Rupture of Membranes*

This is sometimes associated with malpresentation, abnormal lie or excessive liquor. Maternal and foetal infection often develop after prolonged rupture of membranes. There is also the risk of respiratory distress if the baby is born premature.

viii *Suspect Pelvis*

Cephalo-pelvic disproportion is suspected if the patient is less than 150cm in height, the foetal head is four fifths or more palpable per abdomen at term or there is a history of difficult vaginal delivery. It may also be detected on pelvic examination.¹²

RISK ASSESSMENT IN PREGNANCY

The patient may have only one single risk factor in her pregnancy which may therefore be considered as "low risk", but it is not uncommon to detect the presence of several risk factors together. These risk factors may act synergistically and produce a cumulative effect. Patients with severe and multiple risk factors tend to have poorer outcome in terms of intra-uterine growth retardation, perinatal asphyxia, congenital malformations and stillbirth.

Low antepartum risk does not always assume an uncomplicated course. Some complications e.g. cord prolapse and foetal distress, do not become obvious until labour has begun, as every labour is potentially dangerous.

MANAGEMENT OF HIGH RISK PREGNANCY

In general, most patients with risk factors should be referred to the obstetrician at their first antenatal visit. Patients with abnormal lie, presentation or poor foetal growth would require investigations from about 32 to 34

weeks onwards. Primigravidae, grand multiparae and short patients without other complications can be referred near term.

The two main concerns regarding the foetus are the foetal growth and foetal well being. Serial clinical uterine fundal height measurements and ultra-sonographic examinations would detect foetal growth retardation, whereas the foetal well being can be assessed easily by the foetal movement count and the antenatal cardio-tocography.

Close monitoring of the mother and her foetus should continue during labour, so that the aim of delivering the infant in optimal condition at the appropriate time can be achieved.

Conclusion

With better awareness of the risk factors, identification of the risks in each individual patient can be made. Further evaluation of the risks can be performed by the obstetricians, so that plans can be formulated with intervention if required.

REFERENCES

1. Babson S G; Pernoll M L. Diagnosis and management of the foetus and neonate at risk 1980: 9.
2. BMJ: 1980 Editorial 1, 1153.
3. Donald I: Practical Obstetric Problems 1979, 144.
3. Glass R H and Golbus M S: 1978 Habitual Abortion. Fertility and Sterility 29, 257-265.
5. Chamberlain G: Recurrent miscarriage and preterm labour in Clinics in Obstetrics & Gynaecology. Apr 1982, p 115.
6. Douglas C P: Nov 1982, British Journal of Hospital Medicine 55-58.
7. Dewhurst C J: 1957, Journal of Obst & Gynae British Commonwealth p 65, 113.
8. Lopez — Clara M & Horta M; 1974, American Journal of Obst & Gynae p 119, 193.
9. Bonham D G: Jul/Aug 1982, Journal of Paediatric Obstetrics & Gynaecology, 16.
10. Sorensen T; Hasch E and Large A P: 1979 Lancet, 477.
11. Brenner W E; Bruce R D and Hendricks C H: 1974 Am. J Obstet. Gynec. 118, 700.
12. Studd J W; Cardozo L D and Gibb D M F. The management of spontaneous labour in progress in Obst & Gynae: 1982 Vol II p 60.

CLINICAL ASSESSMENT OF FITNESS FOR SCUBA DIVING

Dr C C Khong,
MBBS, M Med (O & G), MRCOG

Col (Dr) Jimmy How,
MBBS, Dip. DHM

INTRODUCTION

SCUBA (Self Contained Underwater Breathing Apparatus) diving is becoming a popular sport in Singapore. Unlike most land sports, SCUBA diving is a physically demanding sport, a fact which many people are often not aware of. Candidates who wish to learn how to dive are presently required to produce a certificate of fitness from their doctors before being allowed to enrol in a course conducted by one of the many dive schools. Although the quality of diving instruction is not under the control of medical practitioners, it is the responsibility of doctors to ensure that the patient is fit for this sport. It must be stressed at this point that while most aspects of the physical assessment is similar to that of other patients, for instance those undergoing pre-employment physical check-up, there are special areas that need to be looked into.

Recent cases of diving accidents are matters for concern. However, these accidents are not confined locally. The West Australian Medical Association newsletter (November, 1987) reported an increase in the incidence of underwater diving accidents. An Underwater Diving Task Force has been appointed by their Minister for Sport and Recreation to plan and implement measures to reduce the number of diving accidents. One of the objectives of the task force is to make recommendations concerning appropriate medical examinations for divers.

Registrar
Department of Obstetrics & Gynaecology
Alexandra Hospital
Singapore 0314

Senior Medical Officer
Republic of Singapore Navy

The authors hope that this article will not only provide some basic background information on diving to the practitioner but will also give the practitioner some guidelines in the conduct of the physical examination, in particular for sport diving.

What is SCUBA Diving?

It is the use of self-contained underwater breathing equipment which enables an individual to stay underwater for longer periods of time compared to breath holding dives. Modern equipment makes use of compressed air contained in metal tanks at pressures of around 3000 pounds/sq in (psi). This pressure is almost 100 times greater than that found in motorcar tyres. This pressure is then reduced through special valves to enable the diver to breathe safely and equalise lung pressure with the ambient pressure. Other basic equipment like masks and fins are swimming aids, weight belts and bouyancy compensators (like Mae West jackets) are bouyancy aids. The bouyancy compensator is also a safety equipment. Some divers wear wet suits made of semi-porous material to keep the body warm and protect them from stinging marine life like jelly fish.

Most sport divers are usually taught to dive at shallow depths, usually no deeper than 60-80 feet (18-25 metres). More experienced divers may descend to 120 feet (36 metres). Professional divers dive to much deeper depths but this article will be confined to discussion of sport diving. There are many reasons for diving in shallow depths. Marine life is more abundant in shallow waters. The visibility and amount of light is also better. Deep diving is fraught with greater danger and the water is generally colder. The dreaded phenomenon called the rapture or narcosis of

the deep will occur at depths greater than 100 feet (30 metres). This is a condition of nitrogen gas toxicity in which the diver manifests with bizarre behaviour similar to drunkenness and a possible loss of consciousness.

Pressure Considerations

The pressure that a diver experiences underwater is great and every increase of a depth of 33 ft (10 metres) means an increase of 1 atmospheric pressure. Under Boyle's Law, the volume is inversely proportional to the pressure. Therefore, at a depth of 33 ft in salt water, all compressible spaces in the body will half its volume under the 2 atmospheric pressure (1 atmospheric pressure at sea level plus 1 atmospheric pressure at 33 ft). As fluid is virtually incompressible, only air filled cavities in the body will be compressed and these include the lungs, sinuses, middle and external ear, tooth cavities and gas within the gastrointestinal tract. While compression of gas in the lungs and gut are usually not noticeable, compression of air in the ears produces pressure differences and pain is experienced. Therefore, all divers need to perform the Valsalva maneuver to equalise the middle and external ear pressures during descent. If the eustachian tubes are blocked, usually because of acute coryza or vasomotor rhinitis, the diver is unable to equalise these pressures and severe pain is experienced in the ears through stretching of the tympanic membranes. Prolonged stretching of the tympanum produces some loss of hearing but is fortunately transient. Even if the diver is able to successfully equalise the middle/external ear pressures during descent, spontaneous escape of air back to the nasal cavity during air expansion while ascending may not occur. This results in what is known as 'reverse ear' and can be extremely painful.

Under increased pressure, nitrogen is also absorbed into lipoid tissues like fat and neural tissues. The deeper and longer the dive, the greater is the amount of nitrogen absorbed. During ascent, nitrogen normally escapes back into the blood stream and is breathed out. However, if the amount of nitrogen absorbed is of considerable quantity, then bubbles of nitrogen can form in the tissues and blood especially when ascent is too rapid. This results in the 'bends' or Caisson's

Disease producing symptoms of pain in the joints and nerve paralysis. This is a potentially life threatening condition requiring immediate recompression in a pressure chamber. Symptoms of the bends usually manifest soon after diving; only a small number of divers start to suffer from it a day or two later.

Diving Courses

As a result of the increasing numbers of diving enthusiasts, many diving schools have gone into business to meet this demand. Diving instructors often go into great expense in time and money to obtain certification from one of the various international diving bodies to teach. While most instructors fortunately take pride in their coaching, there will be some who will try to recover their capital in the shortest possible time. Generally, they cut corners by reducing coaching time and increasing the number of students. In contrast, good instructors are usually fastidious about student performance and the SCUBA equipment they provide during the course. They also do not pass their students until all the requirements have been met. There is at present no definite criteria in which assessment of a good diving school can be made. There can be wide gap between a good diving school and a bad one; the same can be said for diving instructors.

Assessment of Patients

Age

It is generally felt that it is safer for individuals between the age of 18-45 years to pursue this sport. It is recommended that divers above the age of 45 years be assessed on a case by case basis. Young divers between 12-18 years of age must dive with an adult.

Weight and Height

The weight and height of the diver should not exceed 20% above standard body measurements.

Eyes

The eyesight must not exceed more than 8 dioptres from normal vision. Any refraction problem must be correctable by suitable lenses.

People with no more than partial red-green colour blindness are allowed to dive.

Ears

The ears should be able to hear a normal speech range. The eustachian tubes must be patent with a positive Valsalva reaction. The tympanic membranes must be normal and must not have any perforations. The person must not have any severe acute or chronic ear infections, Meniere's disease, vestibular lesions, otosclerotic surgery, nor mastoid operations.

The practitioner must also look for impacted wax and osteoma.

Nose, Throat and Sinuses

There must be no chronic vasomotor rhinitis or gross deviation of the nasal septum. There must be no enlargement of the turbinates, no neoplasms, no anosmia, no history of sinus operations, nor chronic tonsillitis.

Resistant and frequent upper respiratory tract infections are contraindications to diving.

Cardiovascular System

The candidate must not have a congenital heart disease, a potentially lethal cardiac condition, and ischaemic heart disease. There must be no history of heart attack or cardiac failure, shunts or valvular disease, no cardiomyopathy and poor effort tolerance from abnormal rhythms, vascular defects and unstable angina. Those more than 35 years of age should preferably have a resting ECG done and a stress test may even be necessary for some patients.

Hypertensive patients must have their diastolic pressure controlled to 90 mmHg or less. Dives are limited to 70 ft and they are advised against repetitive dives.

Central Nervous System

There must be no history of repeated faintings, fits, headaches, narcolepsy or cerebrovascular diseases. There must be no history of head injuries with skull fractures and/or sequelae with residual side effects. The person must not suffer from motion sickness or demyelinating diseases, and residual deficits of decompression sickness. Past infections of the brain, meninges or spinal cord and a history of intracranial surgery are also contraindications to diving.

Gastrointestinal System

The candidate must not have any chronic gut diseases (e.g. ulcerative colitis and Crohn's disease), chronic liver or gall bladder diseases and bleeding disorder of the gut, vomiting, abnormal bowel habits, recurrent indigestion, peptic ulcer and a history of multiple abdominal surgery.

Urinary System

There must not be any history of renal inflammation, stones, renal insufficiency. The urinalysis must not contain red cells, casts, protein or have the presence of glycosuria or ketonuria.

Endocrine System

There must not be any evidence of thyrotoxicosis, Cushing's or Conn's syndrome. In the diabetic patient, any form of angiopathy, retinopathy, neuropathy or dermopathy contraindicates diving activity. For uncomplicated diabetics, diving is limited to a depth of 70 ft (22 m).

Haematological System

There must be no anaemia, jaundice, bleeding tendencies, active malaria and generalised lymphadenopathy. Haemoglobin should be more than 12.5 gm/dL for females and more than 13.5 gm/dL for males.

Dental

The person must not have dental caries, malfitting dentures, and poor dentition that can affect the bite on the mouth piece. There must also be no bridges, caps, growths and gross malocclusion of the jaws.

Skeletal

All long bones must be normal. Deformities hindering performance during scuba diving is not allowed.

Psychiatric

Psychiatric conditions e.g. mental illness, nervous breakdown, neuroticism, anxiety states, depression, claustrophobia and agoraphobia are contraindications to diving for obvious reasons.

Conclusion

The authors hope that this article will help practitioners to assess those individuals who intend to take up SCUBA diving better. The

long list of exclusions basically reflect the need to enhance safety. Diving is also like driving. One needs to do it regularly to do it safely. It must be appreciated that diving is done in an environment which is unnatural or even hostile to human existence despite the glamorous descriptions about this sport. It is a demanding sport to be enjoyed by healthy individuals. It is quite obvious that patients who are unable to obtain fitness clearance from one practitioner will look for another who will exercise less strictness in their assessment. These patients will no doubt be subjecting

themselves to increased risks but that is, sad to say, a personal decision albeit foolhardy. It will be ideal if practitioners are able to answer any queries posed by patients about this sport and more so if the patient has been found to be unfit for diving.

Footnote:

The authors are both part of the diving community and have found SCUBA diving to be a fascinating sport. They felt that in a small way, with this article, they can help to enhance safety and preserve the spirit of diving as much as they feel about the need to preserve the flora and fauna of the oceans and lakes in which diving is done.

A CASE OF IRRITABLE BOWEL SYNDROME

Dr Selina S L Lim

MBBS, MCGP (S), FRACGP

INTRODUCTION

The irritable bowel syndrome (IBS) is a very common condition amongst patients presenting with gastro-intestinal symptoms in general practice. A case report of a patient with typical features of IBS is presented, followed by a discussion on the clinical approach and management of such patients in general practice.

Case 1

Mrs Lim, a 34 year old accounts clerk first came under the care of the author on 11/6/86.

She had been seen on 3 occasions previously by the other clinic doctor for minor complaints.

On the 11/6/86 Mrs Lim came with the problem of having frequent stools for 10 months. The frequency of her stool was 3 to 4 times per day. Usually she felt the need to open her bowels after food with the preceding abdominal cramps relieved by passage of stools. The stools were brown in colour, soft and slightly loose and the amount was small. She had never noticed any blood in her stools. Apart from the increased frequency of stools over the past 10 months, she was feeling quite well. There had been no loss in weight. In fact, Mrs Lim had been seeing other doctors in the last 10 months for minor complaints but did not tell them about her present problem. She had an appendicectomy 3 years before and at the age of 6 years had a 'cyst' removed from her abdomen. She had no other knowledge of this operation or condition except that she was well after it.

On examination, Mrs Lim was well and healthy looking. Her weight, 46 kg was normal for her height. There was no pallor or jaundice. The abdomen was soft and non-

tender; there were no masses and the liver and spleen were not palpable. The lymph nodes were not palpable and the other systems were normal. Mrs Lim was given the assurance that the chances of there being a serious underlying cause (such as cancer) for her increased stool frequency were slim, considering her age and general well-being. However it was necessary to examine her further and to do some other investigations just to be sure.

An attempt to understand the patient's life-style and psychological state was made. Mrs Lim felt that she had been feeling more stressed of late, probably because of work pressure. She volunteered that she had always been a very excitable person since young.

She had just been married for about a year and had not thought about having children. Her marriage and family life were fine with the understandable "ups and downs" of a new marriage.

Mrs Lim was advised to try to avoid stressful situations, for example, by getting up a little earlier instead of always rushing so as not to be late for work in the mornings. She was also advised not to take too much chilli of which she was very fond.

Diazepam 2 mg b.d. (morning and afternoon) and Librax, 5 mg o.n. was prescribed for 1 week. Rectal examination and proctoscopy was scheduled for a week later as Mrs Lim was apprehensive of it and it was felt that she needed time to prepare psychologically. Stools were sent for culture and sensitivity, ova and cysts — no abnormalities were detected.

Appearance of stools was normal. Stools for occult blood was positive 2+ (note: patient was not menstruating).

One week later, the patient reported that she was feeling much better. She had been careful to watch her diet and made a conscious effort to be aware of the stress in her life and prepare for it.

The frequency of her stools was now 1 to 2 per day, with a normal consistency. As she was menstruating, rectal examination was postponed.

Repeat stools for occult blood was positive on 23/6/86. The patient was still doing well; stool frequency was 2 times per day.

One week later, the frequency of her stools was only 1 time per day even though she was not on medication. Mrs Lim was agreeable for rectal examination at this visit. Rectal examination showed a 2nd degree prolapsed pile at 11 o'clock. The base of the haemorrhoid had a raw looking surface. No rectal mass was felt and the stools were abnormal in colour.

The findings were explained to the patient. The patient was told that the source of the bleeding was most likely the haemorrhoid and the past frequency of stools probably due to her intestines being slightly more irritable in times of stress (irritable bowel). However it was advisable that she should have a sigmoidoscope done to rule out more serious conditions. The patient agreed readily and was referred to a surgeon for this.

SIGMOIDOSCOPY confirmed the presence of secondary degree haemorrhoids. No tumour or other abnormality of the gut was found. Haemorrhoidectomy was carried out.

The symptoms related to her irritable bowel had settled. She continued to be seen in the clinic for episodic illnesses.

DISCUSSION ON THE IRRITABLE BOWEL SYNDROME (IBS)

General Comments

Irritable Bowel Syndrome is a common problem in general practice. It reportedly accounts for half of gastrointestinal complaints seen by physicians, and ranks as a major cause of work absenteeism. It can be defined as a functional disturbance of intestinal motility, strongly influenced by emotional factors.

Emotional stress has long been considered an important contributing factor in IBS. Psychological assessment of IBS patients has resulted in up to 70% of patients being considered to have a psychological problem, though only about 30% of the same patients were so regarded by their physicians. In most cases, the psychological disturbance appeared to antedate the IBS symptoms and only a small minority of control patients with medical illnesses were judged to have similar problems by the same assessment.

Patients seek help because of gastrointestinal symptoms and fear of serious illness. The primary physician must become expert in the diagnosis and management of this very common condition so as to avoid unnecessary investigations and to initiate effective symptomatic therapy.

PATIENT PROFILE

IBS is more common in females, with a sex ratio of about 2.5:1. The mean age at presentation is the mid-thirties, with the onset of symptoms occurring approximately 5 years earlier; patients seldom present for the first time above the age of 50 yrs.

CLINICAL PRESENTATION

The patient with bowel syndrome may present with one or a combination of the following symptoms: diarrhoea, urgency, constipation, pain, distention, borborygmi, flatulence, belching, acid reflux, heartburn and nausea.

It is usually possible to assess the bowel habits of an IBS patient as constipation predominant or diarrhoea predominant (for management purposes) though many patients find that their bowel habits can vary from one feature to the other in turn.

The passage of mucus is common, but rectal bleeding should not be attributed to IBS. Very few patients with IBS pass an abnormally high volume of stools; a sense of urgency to pass frequent, small volume stools, that may be well formed, loose or even pellety is usual.

Physical findings are usually unremarkable, but it is interesting to note that in many patients, the sigmoid colon is easily palpable and tender, and this corresponds to the patient's site of painful cramps. The doctor often notes that the patient look well in spite

of seemingly alarming complaints of recurrent diarrhoea or distressing pain.

DIFFERENTIAL DIAGNOSIS OF IBS

The differential diagnosis of IBS presenting with bowel disturbances includes the following conditions:

- carcinoma of the colon
- inflammatory diseases such as ulcerative colitis and regional ileitis
- infections with *Giardia Lamblia* and *Entamoeba histolytica*
- diverticulosis
- post-gastrectomy dumping syndrome
- malabsorption due to pancreatic insufficiency
- thyrotoxicosis
- carcinoid syndrome
- drugs including laxatives and antibiotics

CLINICAL APPROACH TO THE DIAGNOSIS OF IBS

IBS is essentially a clinical diagnosis. Being a functional illness, the essentials of diagnosis involves:

- eliciting a history of the typical features as discussed earlier,
- eliciting a positive history of psychological stresses,
- exclusion of organic illness based on a thorough history taking, physical examination, and basic screening investigations
- observing for a response to symptomatic treatment and supportive psychotherapy, which would re-inforce the clinical diagnosis.

HISTORY AND PHYSICAL EXAMINATION

The basic importance of a good history and physical examination must be emphasised. In history taking, the presenting complaints of dyspepsia, abdominal cramps, constipation, diarrhoea or irregular bowel habits must be clearly detailed each time, to characterise the complaint, the duration, progress, precipitating and relieving factors. The doctor should ask for associated symptoms of frequent headaches, sleep disturbances and appetite disturbances. An unobtrusive enquiry into areas of work, family life, leisure and

enjoyment in life may reveal positive stress factors.

A thorough physical examination is essential to exclude organic illness, as well as to reassure the patient. The doctor must be very alert for any evidence of malignancy especially in the older age group of patients over 50 years old. General observation includes noting any cachexic appearance, pallor or jaundice. Abdominal examination is done to look for any gastric or intestinal masses, hepatomegaly, para-aortic and cervical lymph nodes. Rectal examination and proctoscopy may show any masses, or the characteristic mucosal lesions of amoebic colitis or ulcerative colitis: the type of stools is also carefully noted.

A quick systemic review includes looking for evidence of uncommon causes like thyrotoxicosis, and features of clubbing and iritis associated with ulcerative colitis.

It must be remembered that the presence of haemorrhoids, a common incidental finding, does not exclude the possibility of a rectal or colonic carcinoma in the patient who presents with bowel disturbances and bleeding per rectum.

The doctor must also keep a constant alert for a change or development of new symptoms and signs, by regularly reviewing the history and physical examination during subsequent follow-ups, as they may indicate the development of an organic illness.

BASIC SCREENING INVESTIGATIONS

The most useful screening investigations for the patient with bowel disturbances are a stools examination for occult blood, and microscopy for ova, cysts and trophozoites. For the patient without the typical features of IBS, or other obvious features of specific illnesses as discussed earlier, sigmoidoscopy and barium enema must be seriously considered, particularly in the presence of a positive occult blood test. Sigmoidoscopy and barium enema is also indicated in older patients (over 50 years old), as IBS is uncommon, whereas the chances of a malignancy are higher.

MANAGEMENT OF PATIENT WITH IBS

Successful therapy requires recognition of the psychological nature of the problem. The most vital aspect of successful management is the rapport between the doctor and the patient.

EXPLANATION TO PATIENT

The patient's symptoms must be made understandable to him and he must be firmly reassured that he does not have a sinister illness. Many patients have a fear of cancer and this concern should be openly discussed. However he should be informed that he does have a condition that is very common and that can be treated.

A simple, physiological explanation based on the concept of "spasm" of the bowel, can be useful and it is also helpful to equate the reaction of the gut to emotions (e.g. a fast pulse and dry mouth to apprehension).

It is preferable for the diagnosis to be explained before any investigations, so that negative results reinforce the opinion of the doctor, rather than leaving the patient with the impression that the doctor could not find out what was wrong with him.

It is vital to communicate to the patient that a diagnosis of irritable bowel syndrome is positive and not a failure to understand the problem. The patient should be told that the investigations are offered "just so that we can both be confident that there is no other disease". At subsequent visits it is important that the patient sees the same doctor so that the diagnosis can be emphasised in the same positive manner.

DIETARY MANIPULATION

There is no convincing evidence to show that diet manipulation is more effective than placebo in relieving symptoms.

However some physicians still advise high fibre diet e.g. by taking bran and bulk — increasing formulations such as Metamucil for constipation.

ANTI-DIARRHOEA AGENTS

Loperamide or Diphenoxylate are commonly used to control the more troublesome diarrhoea. Loperamide is reputed to be more effective but diphenoxylate is cheaper and many patients find it satisfactory.

The dosage of medication should be adjusted to control symptoms without producing constipation. Timing of the dose is also important. The patient can be advised to take a dose in anticipation of embarrassing or

inconvenient diarrhoea in stressful situations.

ANTISPASMODICS

These are widely used for pain relief. However good evidence of benefit is lacking and treatment should normally be short-term.

TREATMENT OF THE PSYCHE

As already mentioned a good doctor-patient relationship is of utmost importance in the management of IBS. The doctor should be compassionate, interested and able to accept the complaints as real. It is not useful for the physician to undermine the patient's symptoms by trying to convince him that it is totally an emotional problem. Rather, one needs to identify important life stresses and relate these to triggering of changes in bowel physiology. In the few patients where the diagnosis of depression is apparent, specific anti-depressant treatment will often alleviate the concurrent IBS symptoms.

PROGNOSIS

IBS is a chronic relapsing condition, but is has no significant mortality. In one study less than 20% of patients were symptom-free within one year of first consultation. Many patients will have had symptoms for several years and these may continue for several years to come.

Studies have shown the definite value of close follow-up and supportive therapy. Most patients reported feeling better, less concerned about their bowels, and more able to cope with their symptoms and the stresses of daily life. Even though there were frequent relapses, these seemed to be of less importance when they occurred in the context of close medical support.

Conclusion

IBS is a very common condition. The primary physician should not shrug it off as an unimportant functional problem. Rather he should see in the management of a patient with IBS, a challenge in good doctoring.

REFERENCES

1. Medicine International, Dec 1985.
2. Medicine International, Vol. 2, No. 9, 1986.
3. Primary Care Medicine by Goroll, May and Mulley.

ACNE VULGARIS — AN UPDATE IN MANAGEMENT

Dr Y C Giam
MBBS, M Med (Paed), AM

Lecture given at Minor Specialities Course 1988

Acne vulgaris is a common skin problem treated by the general practitioner. The doctor must realise the psychosocial problems like depression leading to inhibition of self development. Before he doles out the medicine, he has to reassure the patient that acne can be improved and fairly rapidly.

The knowledge of the pathogenesis of acne helps one in the selection of appropriate treatment as most of the actions of anti-acne products are targetted at specific steps in the pathogenesis.

PATHOGENESIS

Acne vulgaris is a disease of the pilosebaceous follicle. At puberty, the sebaceous gland is influenced by the hormone, androgen and enlarges. This leads to increased sebum production, in which the anaerobic diphtheroid, *Pityrosporum acnes* thrives. These secrete lipolytic enzymes which split triglycerides into fatty acids, which irritate the neck of the follicle to hypertrophy leading to retention hyperkeratosis. This is the primary pathologic lesion in acne, the microcomedone. Meanwhile the follicle continues to distend and finally ruptures. Release of the sebum and keratin causes an inflammation.

Thus, the five main pathologic events in acne are

- a) increase in androgen levels
- b) abnormal follicular keratinisation
- c) increased sebum production

- d) proliferation of *Propionibacterium acnes*
- e) inflammation

The sebaceous glands are stimulated by testicular, ovarian and adrenal androgen. Other hormones such as cortisol, thyroid hormone and possibly others have a permissive role in allowing the sebaceous glands to respond to androgen. Evaluation by new techniques suggests that women with acne may have elevated androgen levels. Less commonly observed changes are increased levels of 17 OH progesterone, luteinizing hormone and prolactin. Thus in acne occurring in adult women, an androgen workup should include the following tests: free testosterone and dehydroepiandrosterone sulfate (DHEA-S). Additional evaluation may include 17-OH-progesterone, follicle-stimulating hormone, luteinizing hormone, and prolactin.

Propionibacterium acnes is the principal component of the microbial flora of the pilosebaceous follicle. Other resident microorganisms include *Staphylococcus epidermidis*, *Micrococci*, and *Pityrosporum* species, which are now thought to play a significant role in the hydrolysis of sebum into comedogenic free fatty acids. *Propionibacterium acnes* also release chemotactic factors which attract neutrophils to the follicular wall. The neutrophil hydrolases are thought to play a role in the destruction of the follicle wall, which permits other chemotactic factors, bacteria, sebum, and follicular keratin debris to escape, thereby inducing further inflammation in the perifollicular dermis. Immunologic studies show that acne patients have specific antibodies to *P. acnes* and elevated levels appear to correlate with the severity of the acne lesions.

*Consultant Dermatologist
Middle Road Hospital*

Other factors known to cause acneiform lesions include

- a) systemic effects of the pituitary, ovarian and adrenal tumours, e.g. Stein leventhal syndrome, Cushings diseases;
- b) drugs like synthetic anabolic steroids, gonadotrophins and corticotrophins (steroid acne), phenobarbitone and isoniazide;
- c) halogen e.g. bromide in soft drinks, iodide in vitamin mineral preparations;
- d) occupational e.g. insoluble cutting oils, chloracne from chlorinated hydrocarbon: chlornaphthalene used in wire and condenser coatings, chlordinophenyl and hydrocarbon phenyloxides.

Factors which have never been proven are genetic inheritance (polygenic), diet: chocolate, nuts, cola drinks and the weather and humidity.

Other lesions which may be misdiagnosed as acne include gram negative folliculitis, rosacea, and on the trunk, pityrosporum (fungal) folliculitis. Gram negative acne occurs while on treatment with antibiotics. The acne worsens and gram negative bacteria can be confirmed by a culture. Rosacea can be distinguished by the telangiectasia. Pityrosporum folliculitis is confirmed by a gram stain of a pustule, showing a budding yeast cell. The treatment is with keratolytics and antifungal therapy.

THERAPY

The clinical approach to management is to classify the acne into

- a) superficial and non inflamed acne consisting of comedones. Topical therapy is sufficient. The open comedone is now accepted as burnt out acne and does not progress to inflamed acne.
- b) deep and inflamed acne, consisting of papules and pustules which are asymptomatic while the firm or fluctuant cysts are tender. Systemic treatment should be started early.

Generally, acne on the face heals faster than truncal acne (front and back of chest)

and the latter may end up in keloidal scars. Superficial and icepick scars form with delayed treatment.

Therapy is directed against known pathogenic factors. With the exception of the most recently discovered miraculous drug, oral isotretinoin, there is no evidence that acne treatment alters the natural course of the disease. Treatment can, however significantly modify disease activity. The mechanism of evolution is unknown. Topical tretinoin (and possibly oral isothretinoin) is the only medication that significantly affects microcomedones and mature comedones.

Treatment of non inflamed acne:

1. Cleansers: chlorhexidine or hexachlorophene (medicated detergents). These remove surface sebum and are bactericidal. e.g. Chlorhex wash, phisoex, phisoderm etc. Excess washing is not recommended as the skin becomes dry.
2. Topical agents:
 - a) anti-bacterial: reduce bacteria. Benzoyl peroxide is the most potent and bactericidal. These may be started at a lower dose, 2.5% and increasing to 5% and 10%. The water based gel is least irritating. e.g. acetoxyl, panoxyl, benzac, ancemed and oxy 5, 10.
Erythromycin and clindamycin lotions appear to have equivalent efficacy in inflamed acne but are bacteriostatic, resulting in emergence of resistant strains. Pseudomembranous colitis is a side effect of clindamycin.
 - b) anti-keratolytic: topical tretinoin as the only one that significantly affects all comedones. e.g. Retin A, Airol Eudyna and clearsil SS. Sequential or combination therapy is currently the treatment of choice.
 - c) anti-desquamatory: sulphur, resorcinol. e.g. acne cream, clearsil.
 - d) anti-inflammatory: including steroids — use for short while as side effects like telangiectasia and steroid addiction is high, e.g. Neomedrol.

Treatment for inflamed acne:

Among the above mentioned topicals, antibiotic lotions are preferred for inflamed acne.

- a) anti-bacterial: first line drugs, effective and safe. *P. acnes* populations in the pilosebaceous follicle may be reduced either by the administration of oral broad-spectrum antibiotics such as tetracycline, doxytetracycline or democlotetracycline, minocycline, or erythromycin. Broad spectrum antibiotics, Bactrim, Penicillin and Dapsone are not so effective.

Tetracyclines are not preferred in pregnant women as it stains the permanent dentition of the foetus. Tetracycline is given 250mg bd but up to 1 to 2 gm have been used. Side effects include vaginal thrush. Minocycline is better than tetracycline as the dose is small, is lipophilic and absorbed better and need to be taken only twice a day with meals. Most teenagers eat all the time and compliance is poor. Minocycline may be tried by general practitioners who find that tetracycline HCl is not effective. The dose is 50mg bd.

- b) anti-inflammatory:
Glucocorticoids may be administered for their sebum reducing and anti-inflammatory properties. Oral glucocorticoids should be used sparingly, in moderate dosage and for very brief periods of time. Intralesional injection of glucocorticoids, such as triamcinolone acetonide, is highly effective for hastening the healing of individual nodulocystic lesions. Excess usage results in permanent atrophic scars.
- c) sebum reducing hormonal preparations:
Oestrogens: for women in younger age group, not recommended in men. It is given as a dose of 0.1mg ethinyl estradiol to be effective in acne. It is given as an oral contraceptive and the progesterone has to be low dose. Sometimes acne is worsen because of the higher doses of progesterone. Anti-androgen e.g. Diane containing 2mg of cyproterone acetate, is not recommended in men. It is used like an oral contraceptive.
- d) agent acting on all known pathogenic factors in acne: Isotretinoin Roaccutane, a

synthetic vitamin A drug is a wonder drug and for the past decade, most of the research has been done with this drug. It appears to affect all of the pathogenic factors in acne. In addition, it is the only drug that produces prolonged remissions in this disease after a course of treatment completed. In addition to the reduction in sebum production, there is a concomitant reduction in *P. acnes*, as well as a profound effect on the inflammatory process. Although inflammatory lesions may be exacerbated in the early stages of treatment, they almost invariably resolve completely. The effect on follicular keratinization is less well understood, but a decrease in comedones is frequently noted. It is preferred to leave the patient on a combination of erythromycin and Roaccutane initially as effect is seen only after six weeks.

The dose is between 0.5 to 1 mg/kg per day for 15 to 20 months. After a month, marked reduction of seborrhoea is noted.

Isotretinoin is teratogenic and should not be given to pregnant women or to women who might become pregnant during the contemplated period of drug administration. A pregnancy test should be done prior to treatment, and strict contraception must be practiced during the treatment period and for 1 month following completion of treatment.

The common side effects include cheilitis, dry mouth, nose and skin, epistaxis, pruritis and skin thinning. Less common are gastro intestinal, central nervous, headache from pseudotumour cerebri (when combined with tetracycline) musculo-skeletal and bony hyperostoses. Biochemically, elevated levels of cholesterol and triglycerides may be observed.

Outmoded forms of treatment include ultraviolet light, Vitamin A and cryotherapy.

Treatment of complications:

Surgical intervention for scars like

- a) dermabrasion: can be attempted if these scars are superficial and acne is inactive.
- b) collagen implants e.g. Zyderm which were indicated for icepick scars have dropped in their popularity recently as they need

three monthly touching up as the collagen degenerates. They have to be injected intradermally, as entering a deeper level leads to severe inflammation. The patient has to be tested for hypersensitivity to the bovine collagen.

REFERENCES

1. Shalita A R, Leyden J E, Pochi P E, Strauss J S, Acne Vulgaris, J Am Acad Dermatol 1987, 16, 410-412.
2. Pochi P E, Acne Vulgaris, in Disease of the Sebaceous glands, Dermatology 1985, vol 2, unit 10-12.
3. Epstein E E ed. Acne, Controversies in Dermatology, 1984, Section 4, 249-300.
4. Milne J A, Acne Vulgaris, Recent Advances in Dermatology, 1973, 3rd ed, 271-244.
5. Cunliffe W J, ed. Isotretinoin, Retinoid therapy. Proceedings of International conference, London 1983, 203-311.
6. Strauss J S et al. Isotretinoin therapy for acne: results from multicentre dose response study. J Amer Acad Dermatol 1984; 10, 490-6.

OPENING ADDRESS THE COLLEGE'S TEACHING SEMINARS

Prof Lee Hin Peng

First of all I would like to thank you very much for this very kind invitation and I am honoured to be invited by your convenor Dr Lim Kim Leong to say a few words.

As you might know, in late 86 the College and the then Department of Social Medicine and Public Health got together to work on a joint memorandum to be submitted to the National University of Singapore Council. This memorandum was essentially to request and to propose the academic recognition of this very important discipline of Family Medicine. We agreed and worked very hard on the joint memorandum. I was on the working committee with people like Lee Gan and Kim Leong and others. Happily in Feb 87 the NUS Council accepted the recommendation. Family Medicine was accepted as an academic discipline in the National University of Singapore. Because of this the department had to change its name, and so it is now called the Department of Community, Occupation and Family Medicine. Unfortunately it is quite a mouthful and the acronym is a bit difficult and unfamiliar to a lot of people and it has not quite caught on yet. We hope with time people will refer to it as the COFM instead of SMPH which was better known in those days.

Rightly so we have concentrated on the undergraduate programme for the time being. We have appointed Dr Goh Lee Gan as our senior lecturer and he has worked very hard to produce the students' handbook, to obtain teaching material, tighten up some of the teaching programme and posting in general practice/family medicine. So a lot of effort has been mainly in the area of undergraduate teaching. Of course with a small department like ours there is no way we can conduct

undergraduate teaching on our own. So we are very happy to receive the encouragement and the very strong support of the College in teaching Family Medicine to our undergraduates. That is why quite a lot of College members, about 50-60 of them are on the teaching panel and we are very happy and thankful for this support.

In terms of post-graduate education the College is doing a fine job and there is no reason why the Department should take over this function. All that we would like to do will be to support the College in any way possible. This teaching seminar is one example. We are very happy to collaborate with the College and any programme that seeks to upgrade the knowledge and skills in general practice/family medicine will always be supported.

Nowadays whenever we talk of excellence in health care, the impression given is always in terms of high tech hospital based medical care. But excellence in primary health care is just as important. In fact in terms of effective health care of the people, the majority of people, it is really in terms of excellence in primary health care. If you are able to look after the people well enough then we can hopefully avoid some of the unnecessary hospitalisation that take place nowadays... and so this teaching seminar and whatever other CME program that you will have in the College will certainly receive our strongest support and we will be happy to collaborate and work together with the College to upgrade the skills and knowledge in this area.

I understand from your organisers that this teaching seminar will concentrate on learning by discovery and problem solving. I certainly wish you a very stimulating and enlightening deliberation. The only regret that I have is that unfortunately because of some prior commitment I will have to leave after this. So I wish you all the best and thank you very much.

*The Department of Community, Occupational &
Family Medicine*

THE COLLEGE'S TEACHING SEMINARS

K L Lim
MBBS, FCGP(S)

Ever since the College was formed in 1971, we wanted to have vocational training in family medicine/general practice. We wanted young doctors to enter into general practice by design and with training, and not by default.

We have sent a few memoranda to the Ministry of Health regarding this, but thus far we have not achieved any success. Vocational training requires huge financial commitment and the support and cooperation of the Ministry. Without their support, it is not possible for the College to implement any form of vocational training.

We have therefore decided to run a series of teaching seminars in family medicine/general practice (FM/GP), as a step towards the establishment of a vocational training programme.

Before I go further into the teaching programme I would like to discuss the terms, "primary health care", "family medicine" and "general practice".

PRIMARY HEALTH CARE

At the International Conference on Primary Health Care held in September 1978 in Alma-Ata, capital of the Soviet Republic of Kazakstan, "primary health care" was defined as follows:

1. reflects and evolves from the economic conditions and socio-cultural and political characteristics of the country and its communities and is based on application of the relevant results of social, biomedical, and health-services research and public health experience.
2. addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly;
3. includes at least education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and

proper nutrition, an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunisation against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs;

4. involves, in addition to the health sector, all related sectors and aspects of national community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications, and other sectors; and demands the coordinated efforts of all those sectors.

Primary health care doctors therefore include the general practitioners in private practice, the doctors in the Primary Health Care division of the Ministry of Health, the doctors in the A & E Units, and the SAF. It is clear that primary health care doctors are expected to be more than just "cough and cold" doctors, to do more than just treat simple diseases and minor injuries. They are expected to provide "promotive, preventive, curative and rehabilitative services" to the patients in the community. In short they should practice family-based medicine.

FAMILY MEDICINE/GENERAL PRACTICE

These two terms are used interchangeably. In WONCA (the World Organisation of National Colleges and Academic of General Practitioners/Family Physicians), the term "family medicine" is favoured by the American, Canadian and the Philippino. Thus their organisations are called the American Academy of Family Physicians (AAFP), the College of Family Physicians of Canada (CFPC) and the Philippine Academy of Family Physicians Inc (PAFP). The term "general practice" is still favoured and retained by the British, the Australian and the

New Zealander. Thus their colleges are called the Royal College of General Practitioner, The Royal Australian College of General Practitioners, the Royal New Zealand College of General Practitioners. Our college and that of the Malaysians follow the Anglo-Saxons, and are called the College of General Practitioners, Singapore and the College of General Practitioners of Malaysia.

The new Department of Community, Occupation and Family Medicine used the term family medicine instead of general practice, to reflect the discipline of family medicine which will be taught in the undergraduate curriculum. The term family medicine also translates better into Hanyu Pinyin and evokes a more positive response to the discipline. But for the present, the two terms are used interchangeably.

Family Medicine emphasises the importance and relevance of family-based medical practice in the delivery of health care although that is not the only feature.

Family medicine in detail:

- * is responsible primarily for both acute medical care and the continuing health maintenance of the family;
- * personalises medical care, treating not only the demands of illnesses but also the patient's frequently unspoken needs;
- * emphasises preventive techniques and early detection and treatment of diseases: reduce the need for hospitalisation (hence reducing the cost of medical care);
- * goes beyond the biomedical model: utilises clinical medicine for physical ailments, behavioural science for emotional problems and community dynamics for social aspects of health and disease;
- * deals with the patients as members of family units, the functional dependent group with which the individual establishes primary relationships.

A family physician/general practitioner therefore is a doctor who provides personal, primary, comprehensive and continuing health care to his patients in relation to their families, the community and their environment. He may attend to his patients in

his clinic, in their homes or sometimes in the hospitals.

In treating his patients the practitioner must take into consideration the whole person, their psyche as well as their organ-systems and must not treat just the signs and symptoms.

In providing comprehensive and continuing care he will need to interact with his medical and para-medical colleagues. In promoting his patients' health he will not only treat therapeutically but also educate and counsel his patients.

TEACHING SEMINARS IN FAMILY MEDICINE/GENERAL PRACTICE

The seminars are structured to teach the philosophy and practice of family medicine to all participants. As the syllabus follows closely that contained in the College Examination Handbook, the seminar will prove useful to those who intend to take the College examination in 1988.

The teaching faculty are mainly senior members of the College and the Department of Community, Occupation and Family Medicine (COFM). A few specialists will be invited to help the teaching faculty in some of the sessions. The teaching faculty are expected to collate the most updated articles relating to the subjects, and together with statistics, charts etc especially of Singapore will form the resource materials for the seminar.

The participants will be expected to take an active part in the presentation and discussion at each session, and the more senior and experienced practitioners will be invited to share their wealth of experience with the rest of the participants.

We have limited the number of sessions in the series to 20, and rather than cover the whole breadth of the discipline the subjects are selected on basis of importance to daily practice. However, we hope to be able to cover the other important topics in the future.

We do hope we will be able to achieve our aim of teaching the discipline of family medicine to our fellow primary care practitioners.

FAMILY MEDICINE AS AN DISCIPLINE

Dr L G Goh, MBBS, M Med (Int Med)

FAMILY MEDICINE DEFINED

Family medicine may be defined as a discipline concerned with the personal, primary, comprehensive and continuing health care of the individual in relation to his family, the community and his environment. The label "Family Medicine" is chosen in preference to "General Practice" or "Primary care medicine" (almost synonymous labels of this discipline) to emphasise the family as a sociological unit providing support to the individual as well as to reiterate the importance of the family in the cause and effect of health and disease in the individual.

SCOPE OF FAMILY MEDICINE

The clinical scope of family medicine includes:¹

- (a) the common and important illnesses of general practice which are troublesome to the patient in the short term but which usually do not threaten life and is therefore rarely seen in hospital;
- (b) the early and the late stages of acute, serious or progressive illnesses normally seen only at particular stages of their evolution in hospital;
- (c) the care of patients with continuing or recurring health problems such as asthma, epilepsy, diabetes mellitus, arthritis and hypertension.

*Senior Lecturer in Family Medicine
Department of Community, Occupational &
Family Medicine
National University of Singapore*

PERSONAL CARE, PRIMARY CARE, CONTINUOUS CARE, AND COMPREHENSIVE CARE

Family medicine seeks to provide personal, primary, continuing care and comprehensive care:²

- (a) **Personal care** implies a close rapport between the patient and the doctor. The patient may consult his family doctor not only when he is unwell but may seek his counsel as a friend and mentor.
- (b) **Primary care** is the care that any community considers should be handled by the doctor of first contact. The essential point is that the nature and extent of such care is decided by the community, not the doctor. Community constraints may be cultural, social or economic. The boundaries of primary care in any community are fixed at one extreme by the patients who decide that problems they wish to bring to the professional and at the other extreme by the availability of secondary care facilities. Nevertheless, as primary care shifts from episodic care to continuing, comprehensive care, the patients' usage behaviour may well change.
- (c) **Continuing care** is the use of the same doctor or same facility for an ongoing problem. This has the advantage of continuity of medical records and the morbidity experience of the patient. The doctor is able to know the patient and the feedback response to treatment better.
- (d) **Comprehensive care** depicts the wide scope of care that (i) covers all age groups, (ii) spans promotive, preventive, curative, rehabilitative and palliative care, as well as (iii) care that deals with not only physical, but also social and psychological problems. In fulfilling the broad scope of

care, the family doctor may have to enlist the help of his specialist colleagues as well as the primary health care team. This is "whole person" medicine or holistic care.

KNOWLEDGE, SKILLS AND ATTITUDES

Clinical medicine, community medicine and the behavioural sciences contribute to the knowledge, and skills of the discipline. To these are added a corpus of knowledge, skills and attitudes that are specific to family medicine. The latter is being continually being crystallised and defined as academic departments of family medicine/general practice are set up. These endeavours will take family medicine out of the shadows and remove the stigma of being just "soft medicine".

Family Medicine and Hospital Medicine

Hospital medicine is different but complementary to family medicine. In the vocational training programme of family doctors, the hospital postings are an essential part of training to provide the core knowledge and skills. To this must be added training on the concepts, skills and attitudes of family medicine.

Family Medicine and Community Medicine

Family medicine have an overlapping interest with community medicine but with a different focus. The overlapping areas are in preventive care and the family as a sociological unit. One difference in focus is that family medicine is more immediately concerned with the individual, whereas community medicine is focussed on the community. Another difference is that family medicine has a larger component of treatment and rehabilitation whereas community medicine has a larger component of prevention; its role in treatment and rehabilitation is more synergistic. The two disciplines are therefore, like hospital medicine and family medicine, complementary.

FAMILY MEDICINE AS BEING DISTINCT FROM HOSPITAL MEDICINE

One way of defining family medicine is to compare it with hospital medicine. It differs from the latter in the context of (1) the patient, (2) the problem solving process, (3) management options, and (4) doctor-patient relationship.

THE PATIENT

Figure 1 shows the difference between the patient presenting to the GP and to the hospital doctor or specialist.³

FIGURE 1:
THE PATIENT AS SEEN BY THE GP AND THE HOSPITAL DOCTOR

	GP	Hospital doctor/specialist
Initiation	Patient	Doctor
Patient's story	Unstructured Spontaneous	has told his story many times and will have tuned it according to responses of other doctors
Patient Freedom	High	Low
Security in Environment	Secure	Insecure
Removed from social function	No	Yes

CONSULTING AND PROBLEM SOLVING

There are differences in the consulting goal, scope of the problem as well as the problem solving approach which is appropriate to GP and specialist context; see figure 2.

The patient in general practice/family practice presents with a wider range of reasons for seeing the doctor as compared with the hospital patient. In the hospital patient, the biomedical model will suffice: most if not all patients there have a physical problem.

Reason for Encounter

The patient in general practice may seek his GP for one or more of the following reasons:

(a) Pain or other symptoms

Most medical encounters would concern physical complaints. The patient presents because his limit of tolerance has been reached. The limit may be pain, discomfort or disability.

(b) Follow-up of chronic diseases

Common problems are diabetes mellitus, hypertension, bronchial asthma, chronic bronchitis and epilepsy.

(c) Prevention of disease

As a rule, the patient's request for preven-

tive activity is obvious from the nature of the consultation often involving prenatal or well-child care, routine immunisation, pre-employment examinations, or the periodic health examination. A request for a check-up should alert the doctor to explore the underlying reason, which may be a specific symptom for which the patient seeks reassurance.

(d) Accident and emergency

The physical nature will be obvious. In dealing with a specific emergency, the doctor adopts a different approach. Instead of taking a history and performing an examination in the usual way, he replaces this with a technique of rapid assessment and immediate management. As doctors of first contact, we have to be conversant with illnesses that may give rise to emergencies. Additionally, we will be expected to know the immediate steps on diagnosis and management that are required on the roadside, in the home or consulting room. The anxiety and fear of the patient or close ones that may accompany the situation may require management.

(e) Problems with living

Those who seek the doctor's help with problems with living complain of such physical symptoms of fatigue, headache, abdominal pain, constipation, palpitations and insomnia. Accurate definition of the problem requires that the doctor creates the opportunity for communication and resists the temptation to apply a mechanistic model.

(f) Anxious about meaning of symptoms

Patients whose real need is reassurance frequently, if not usually, present their symptoms rather than express their fears. And in response to these symptoms, the physician may achieve a diagnosis and proceed to treatment without recognising the patient's major problem. Cartwright has shown that in Britain patients interviewed at the end of consultations had seldom received adequate reassurance, and many of them had found their experience alarming rather than comforting.

(g) Need to legitimise sick role

Society has given doctors a statutory role in the certificate of illness, the patients who wish to take up the sick-role are by

no means confined to those who want to be excused from work; the school child wishing to avoid school and the housewife who desires to manipulate her environment are almost as common.

(h) Follow-up for undifferentiated problem/acute illness

Time may be used as a management tool if the patient is otherwise well and not in danger; the patient should however be given the understanding to report back earlier or seek hospitalisation if the illness becomes severe. Some acute illnesses should be followed-up to ensure completeness of cure, as for example, antibiotic therapy for infections.

Three questions to be addressed

It is useful to ask oneself the following three questions where the reason for encounter is not immediately obvious, and particularly in patients presenting with symptoms that suggest problems with living or who appear to have anxiety about meaning of symptoms.

- (i) What made the patient decide to contact the doctor?
- (ii) What does the patient think is wrong?
- (iii) What does the patient expect of the doctor?

**FIGURE 2:
THE PROBLEM AS SEEN BY THE GP AND THE
HOSPITAL DOCTOR**

	GP	Hospital
Consulting goal	Define Problems	Make diagnosis: define pathophysiology
Scope of problem	Holistic — whole person: subdiagnostic nondiagnostic included	Reductionist — systems and organs
Problem solving approach	Hypothetico-deductive — Hypothesis of Reason for encounter — selective history (patient's views, fears and expectations) — selective examination	Inductive — complete history — complete examination — extensive lab investigations

Problem Solving

Problem solving is a process which is modified by the environment of the setting, the level of doctor/patient relationship, experience and attitudes. Solutions to medical problems are not restricted to diagnosis only but must include the development of suitable management plans.

"Illness" as presented to the GP have the following characteristics:

- (a) The patient often presents more than one problem at the same visit. In one study (Benson, 1976) the average number of problems was 2.5.
- (b) The problems are often not presented in order of priority. The most serious problem may be left until the end of the consultation — or not even mentioned at all.
- (c) The most sensitive problems may be expressed in direct or metaphorical language.
- (d) The problem is not necessarily the same as the disease. Thus some of the problems patients bring to their GP are not related to pathophysiology but are emotional or social in origin and may have to be defined in "non-diagnostic" terms, e.g. "work stress" or "failure to cope".
- (e) The problem may not allow precise definition because the symptoms and signs are not conclusive, and expensive and invasive investigations are not warranted. One is not going to do spine X-rays for every patient with backache, or barium meals for every patient with epigastric discomfort. Therefore, the problem is defined in "sub-diagnostic" terms, e.g. "lumabgo" or "indigestion".

Symptom evaluation in General Practice

In general practice, problem solving is based on a symptoms evaluation that includes non-physical possibilities and that selective rather than comprehensive physical examination is used to confirm or reject the hypothesis made about what is wrong with the patient.

Medical school training concentrates on physical disease and its investigations, diagnosis and treatment; it is in this area that many of us feel most secure.

Patients recognise the medical bias in favour of definable disease and present their problems in this mode:

- (a) A patient who is worried about his heart is more likely to present a symptom, such as pain in the chest, rather than a frank opening statement about his anxiety.
- (b) Many who require certification of ill health begin the consultation with a description of symptoms rather than initially demanding a certificate.
- (c) Those who are having problems of living — the depressed, the anxious or the lonely will repeat symptoms such as tiredness, lack of energy, sleeplessness, abdominal pain or headache rather than reveal the origin of their difficulties.

Hypothetico-deductive Approach

In general practice, the hypothetical-deductive approach of diagnosis is more appropriate than the traditionally taught inductive approach which is more suitable for solving the problem of the hospital patient.

Early in the consultation, the doctor begins to make hypothesis (one or several) from cues derived from the patient's description of symptoms ("offer") from observations that may be made in the course of the interview phase, the doctor has made hypotheses which are then further tested in the physical examination, and sometimes by special tests.⁴ See figure 3.⁵

Early recognition of serious illness

The general practitioner functions as doctor of first contact and consequently patients have easier access to him than to hospitals or specialists (both in terms of convenience of location, and absence of bureaucratic barriers). This means the GP is often involved with illness at an early stage, when symptoms have yet to be organised into an illness. This "pre-classical" presentation plus the characteristic unselected mix of patients makes the early diagnosis of serious illness a difficult challenge.

The general practitioner needs to develop a high index of suspicion. This comes with experience. If one analyses the process of making an early diagnosis of important and life threatening illness, some elements of this process can be recognised. These include:⁶

- (a) **Level of factual knowledge.** It is not possible to make an early diagnosis if the particular disease is unknown to the

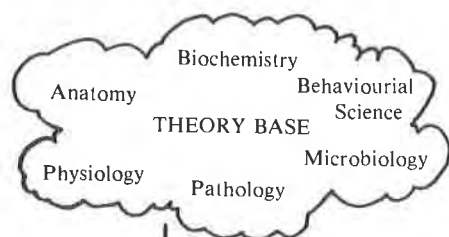
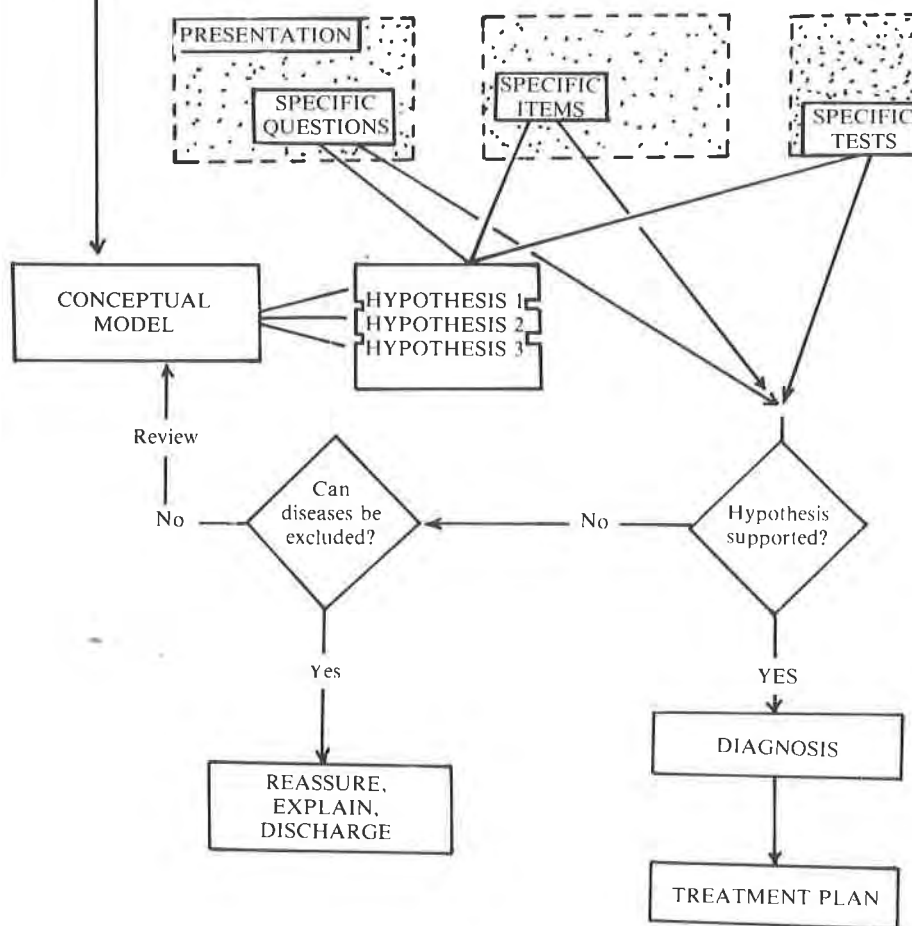


FIGURE 3:
HYPOTHESIS GENERATING AND TESTING IN THE
CLINICAL TASK



doctor, although he may well recognise that it does not fit into his known patterns of illness, or the presentation is atypical.

- (b) **An appropriate epidemiological base.** This is important, particularly the natural history of a disease. Thus, variation from the usual pattern may indicate an atypical course, or an incorrect diagnosis.

- (c) **Knowledge of the usual health status of the patient.** A change in the usual and anticipated health of a patient known to the doctor may indicate the presence of an underlying disease before it is complained of by the patient. Hypothyroidism is often recognised by the doctor and not by the patient, by the observed change from the last clinical contact, e.g., weight gain,

slowness of speech, deepening of voice, and coarsening of features.

- (d) **Appreciation of illness severity.** The doctor learns to recognise and assess the symptoms that are more likely to indicate an underlying serious complaint, as well as those symptoms which are unlikely to result from serious illness. For example, unexplained weight loss, not due to dietary change may indicate the presence of a serious illness; indigestion which wakes the patient is likely to have an organic cause; the occurrence of rigors suggests that a fever is likely to have a serious cause.
- (e) **Experience** in recognising atypical presentation of common illness and the usual presentation of rare illnesses. Thus, having been similar problem previously, this similarity may cue the doctor to the true nature of the problem.
- (f) **Use of time as a diagnostic tool.** This is used in all diagnostic processes, but is particularly important to the early recognition of serious illnesses. Thus, follow-up of the patient with undifferentiated symptoms is necessary.

MANAGEMENT OPTIONS

In planning treatment or management, the GP has to take into account the patient's other problems and the impact of his illness on his own and his family's social function. The ideal may not be possible: the patient may have to stay at work and cannot accept bed rest, for instance. See figure 4.

**FIGURE 4:
MANAGEMENT AS SEEN BY THE GP AND THE
HOSPITAL DOCTOR**

	GP	Hospital
Management philosophy	Practical compromise in treatment	Best buy treatment

Management options in general practice include (a) symptomatic treatment, (b) symptomatic treatment and review if the problem is undifferentiated, (c) definitive treatment where the diagnosis is clear and outpatient treatment is possible, (d) supportive treatment may be indicated to improve the general health of the patient, (e) health education for

problems preventable by lifestyle modifications, (f) counselling and psychotherapy may be necessary for patients with problems with living, either by the GP himself or through the help of a counsellor or psychiatric colleague, (g) reassurance may be necessary for the patient who is anxious about the meaning of symptoms and selective examination and investigations have excluded serious disease, (h) discouraging a sick-role where the illness does not demand rest or if continued employment or activity is deleterious and (i) referral for problems requiring inpatient care, or for a second opinion, investigations or specialist care.

DOCTOR-PATIENT RELATIONSHIP

The relationship between the patient and his GP is likely to be more personal and continuous than that of the hospital doctor. The good relationship however, is bipartite, namely both the patient and the family doctor contribute to this. The attitudes of the patient, and the empathy of the doctor are important variables.

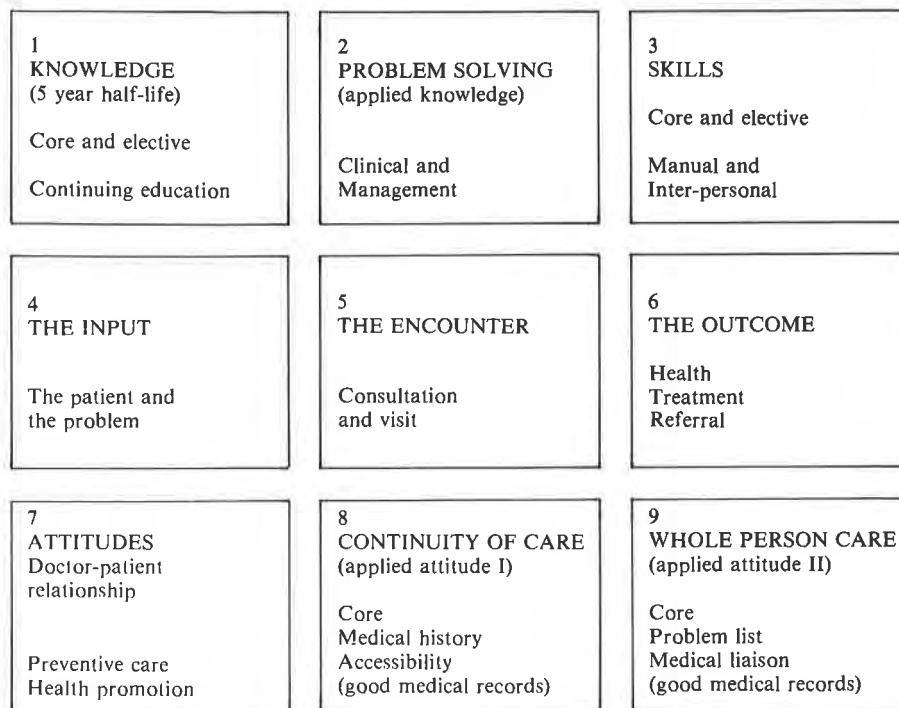
MAP OF ESSENTIAL ELEMENTS IN FAMILY MEDICINE/GENERAL PRACTICE TRAINING

An useful framework on which to base family medicine/general practice training is that described by Hugh Carpenter, see Figure 5. The corpus of knowledge, skills and attitudes required of a family physician/general practitioner can be fitted into this framework.

REFERENCES

1. Howie JGR et al. The Mackenzie report: General practice in medical schools of the United Kingdom — 1986. *Brit Med J.* 292: 1567-1571.
2. Hodgkin K. *Towards Earlier Diagnosis*, 5th ed, 1985. London: Churchill Livingstone.
3. Department of General Practice. University of Nottingham. *General Practice Attachment, Student's Notes*.
4. Department of General Practice, University of Manchester. *Student's Handbook*, 1987.
5. Metcalfe D, personal communication.
6. Monash University. *Student's Handbook: Final Year Course in Community Practice*, 1982.
7. Carpenter, Hugh. *Becoming a General Practitioner. Family Practice*: 4: 61-67.

**FIGURE 5:
MAP OF THE ESSENTIAL ELEMENTS OF
GENERAL PRACTICE TRAINING**



HOME STUDY SECTION

X-RAY QUIZ



FIG. 1

This is a Chest X-ray of a male adult done in the anterior posterior sitting position. He had a history of chest pain some years ago.

QUESTIONS

- 1) Can you identify the abnormality?

ANSWERS TO X-RAY QUIZ

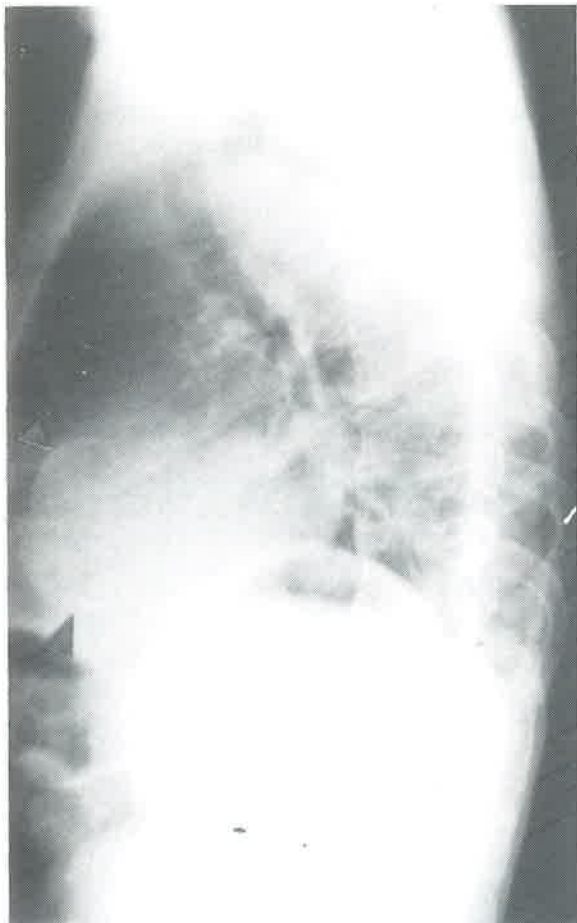


FIG. 2

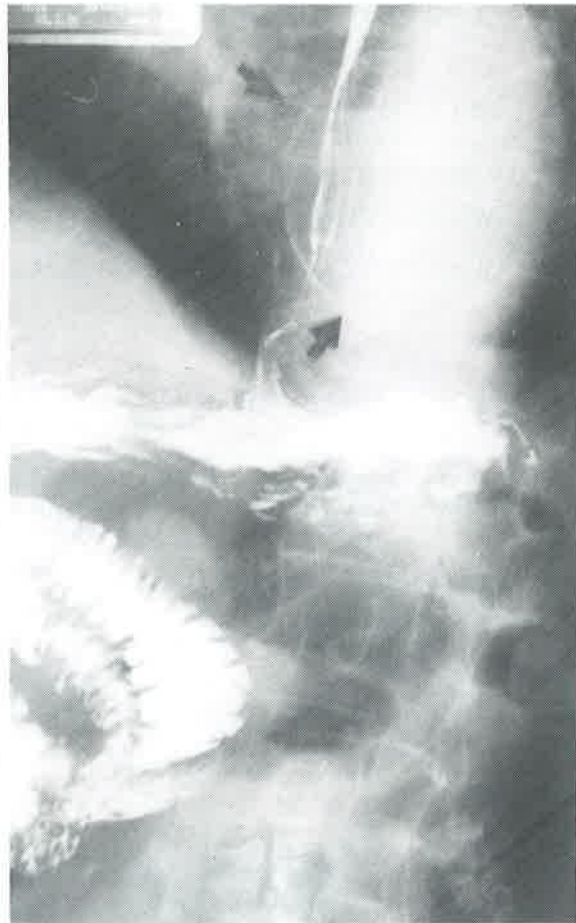


FIG. 3

There is a rim calcification of the left ventricular wall (arrows). The lateral and oblique views shows that it lies anteriorly (Fig. 2 & 3).

DIAGNOSIS: Calcified left ventricular aneurysm

DISCUSSION

Dystrophic calcification of cardiovascular tissue occurs in degenerate or dead tissue. In this case the patient has suffered from a previous myocardial infarction of the left ventricle. In the AP sitting position, there is magnification of the cardiac outline which makes it difficult to assess heart size accurately.

Prepared by Dr K Param, MBBS, DMRD, FRCR

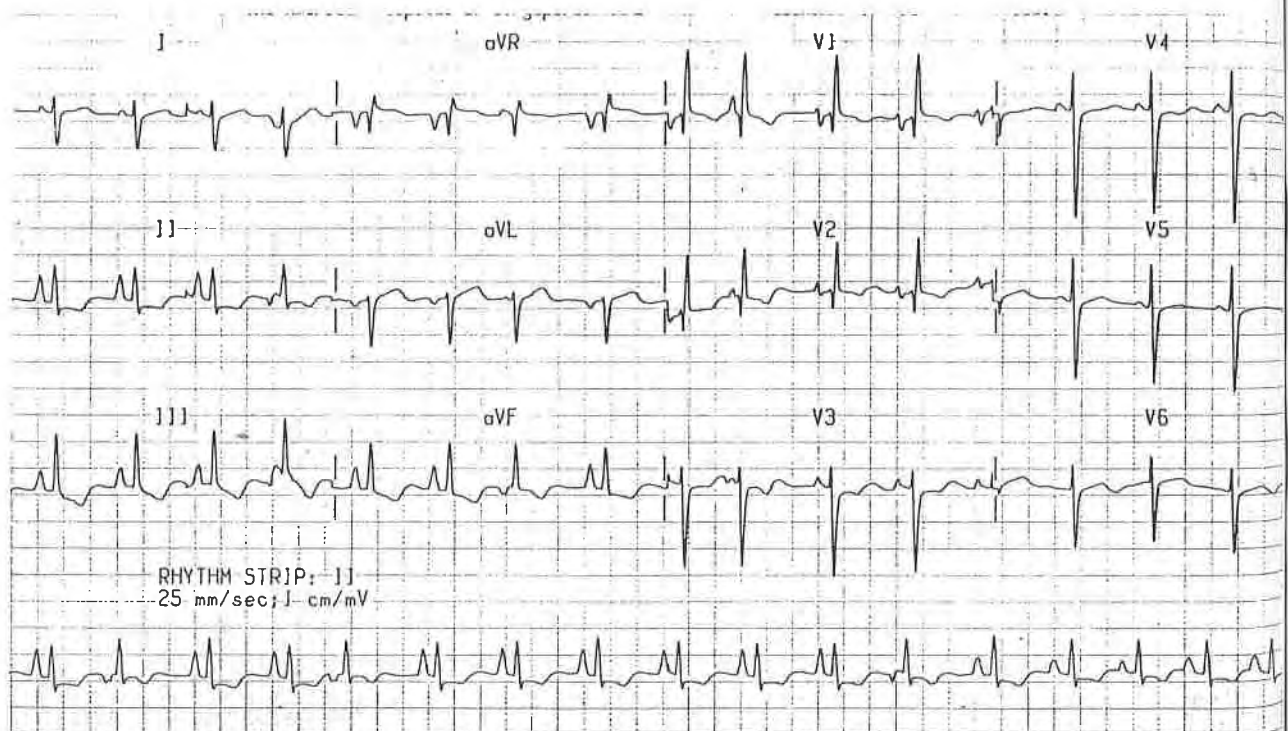
ECG QUIZ

Contributed by Dr Baldev Singh, MBBS (S'pore), M Med (Int Med) MRCP (UK)

The ECG shown belongs to a 44-year-old male who has a long standing history of shortness of breath on effort. He smoked about 10 cigarettes/day for about 10 years in his 20's but stopped after that. He had no cardiac murmurs but P₂ was accentuated.

What are the ECG abnormalities?

What in your opinion is the clinical diagnosis?



ANSWERS

1. Tall P waves in II, III AVF.
P wave is 5 mm in II.
2. Rt axis deviation. Frontal plane QRS axis is $+120^\circ$.
3. Tall R waves in V1, V2 and deep S waves in V5, V6.
4. There is ST/T depression in II, III, AVF and V1, V2, V3.
5. Premature atrial contractions are seen. (complex No 2, 5 and 12 in the Rhythm strip)

Conclusion

The patient has Rt. atrial and Rt. ventricular hypertrophy.

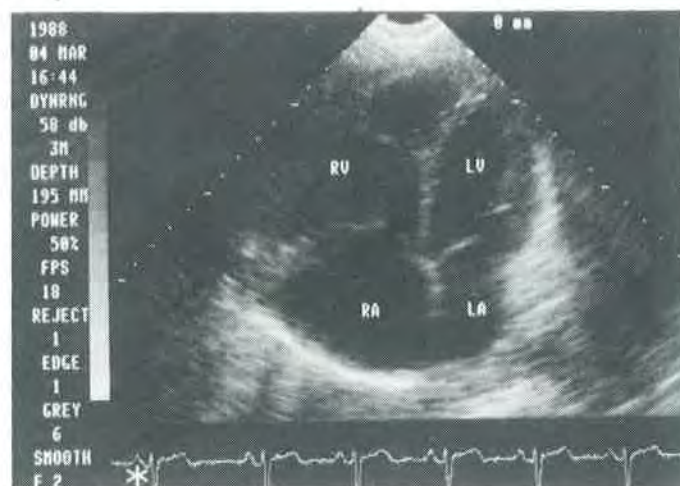
Comment

These ECG changes are commonly seen in Chronic Obstructive Airway Disease due to heavy smoking. This patient's smoking history does not appear to be significant.

An echodoppler examination was done and this confirmed that the patient had a very enlarged Rt atrium and Rt ventricle. The pulmonary artery was also enlarged. There was no interatrial or interventricular shunt.

A still frame from the apical 4 chamber view of the 2D echocardiogram is shown below. A prominent moderator band is also seen extending horizontally from the interventricular system to the Rt. ventricular wall.

This patient had primary pulmonary hypertension.



NEWS FROM THE COUNCIL

1) Continuing Medical Education

The CME Committee conducted a course on "Minor Specialties" from January-March 1988. The programme included the following:

Date	Topics	Lecturer	Moderator
08.1.88	Approach to the Patient with Tinnitus	Dr Raphael Chan	Dr Hia Kwee Yang
15.1.88	Hearing Difficulties	Dr N Kunaratnam	Dr Henry Yeo
22.2.88	Approach to the Patient with Hoarseness	Dr Chew Chuan Tieh	Dr Alfred Loh
29.1.88	Nasopharyngeal Carcinoma	Dr Teoh Choo Keng	Dr Cheong Pak Yean
05.2.88	Use of Laser in Medicine	Dr Sundarason	Dr Y C Lee
	Use of Laser in O & G	Dr T H Ho	Dr Y C Lee
	Use of Laser in Ophthalmology	Dr Cheah Way Mun	Dr Y C Lee
12.2.88	The Patient with Impaired Vision	Dr Cheah Way Mun	Dr Richard Ng
04.3.88	Management of Acne	Dr Giam Yoke Chin	Dr Soh Cheow Beng
11.3.88	Recent Advances in Imaging Technique	Dr Lenny Tan	Dr Goh Lee Gan

2) Teaching Seminars

The College together with the Department of Community, Occupation & Family Medicine have been jointly conducting a series of seminars on Family Medicine. The seminars, consisting of 4 modules of 5 sessions each commenced on 9 January and will end in June.

3) GP Clinical Tutors' Workshop

This Workshop was jointly organised by the College and the Department of Community, Occupational and Family Medicine. It was held on Sunday 10 April 1988 to finalise the teaching programme for GP posting of undergraduates.

4) MCGPS Examination

The College Diplomate examination which was scheduled to be held on 23 and 30 October and 6 November this year received a total of 9 applications.

5) Seminar on Prostatic Diseases

This was held on 19 March at Holiday Inn Parkview in conjunction with the Singapore Urological Society. A total of 180 members participated in the Seminar. The topics covered were:

- 6.30 — 6.40 pm Address by the Chairman Dr Lee Suan Yew
- 6.40 — 7.00 pm Anatomy & Medical Aspects of Benign Prostatic Hyperplasia
[by Dr Tan Eng Choon]
- 7.00 — 7.20 pm Surgical Aspects of Benign Prostatic Hyperplasia
[by Prof Foo Keong Tatt]
- 7.20 — 7.40 pm Update on Prostatitis [by Dr I R Rekhraj]
- 7.40 — 8.00 pm Update on Prostatitis [by Dr Stephen Lim]
- 8.00 — 8.30 pm Question Time

6) New Members

The College welcomes the following new members:

Dr Ganesh Balasundram	Associate Membership
Dr R Chandrasekaran	Ordinary Membership

9TH ANNUAL SCIENTIFIC MEETING

Chapter of Physicians
Academy of Medicine, Singapore
Sunday 30 October 1988
Tanglin & Katong Room
Shangrila Hotel
Orange Grove Road
Singapore



SUNDAY 30 OCTOBER 1988

9.00 — 10.00 am	Registration
10.00 — 10.05 am	Welcome Address Dr Vernon Oh, Chairman, Chapter of Physicians
10.05 — 11.00 am	Plenary Lecture DNA RECOMBINANT DIAGNOSIS OF GENETIC DISEASE Prof Wong Hock Boon
11.00 — 11.15 am	COFFEE
11.15 — 12.15 pm	Free Papers: Session 1 & 2
12.15 — 1.00 pm	LUNCH
1.00 — 3.00 pm	Free Papers: Session 3 & 4
3.00 — 3.30 pm	TEA
3.30 — 4.30 pm	SYMPOSIUM ON HYPERLIPIDAEMIAS
4.30 — 4.45 pm	PRESENTATION OF MERIT AWARDS

For more information please write to: **Secretariat**

Academy of Medicine, Singapore
College of Medicine Building
16 College Road Singapore 0316
Tel: 2238968 Telex: RS 40173 ACAMED

The World Organization of National Colleges,
Academies and Academic Associations
of General Practitioners/ Family Physicians



12th WONCA WORLD CONFERENCE ON FAMILY MEDICINE

Hosts: Israel Association of Family Physicians

'UNIVERSAL ISSUES IN FAMILY MEDICINE'

Post-Conference:

INTERNATIONAL SYMPOSIUM OF THE INTERNATIONAL ASSOCIATION
OF AGRICULTURAL MEDICINE & RURAL HEALTH
TIBERIAS, ISRAEL, 2 - 5 JUNE, 1989

FOR DETAILS PLEASE CONTACT YOUR **COLLEGE/ ACADEMY** or
The Secretariat, WONCA 1989

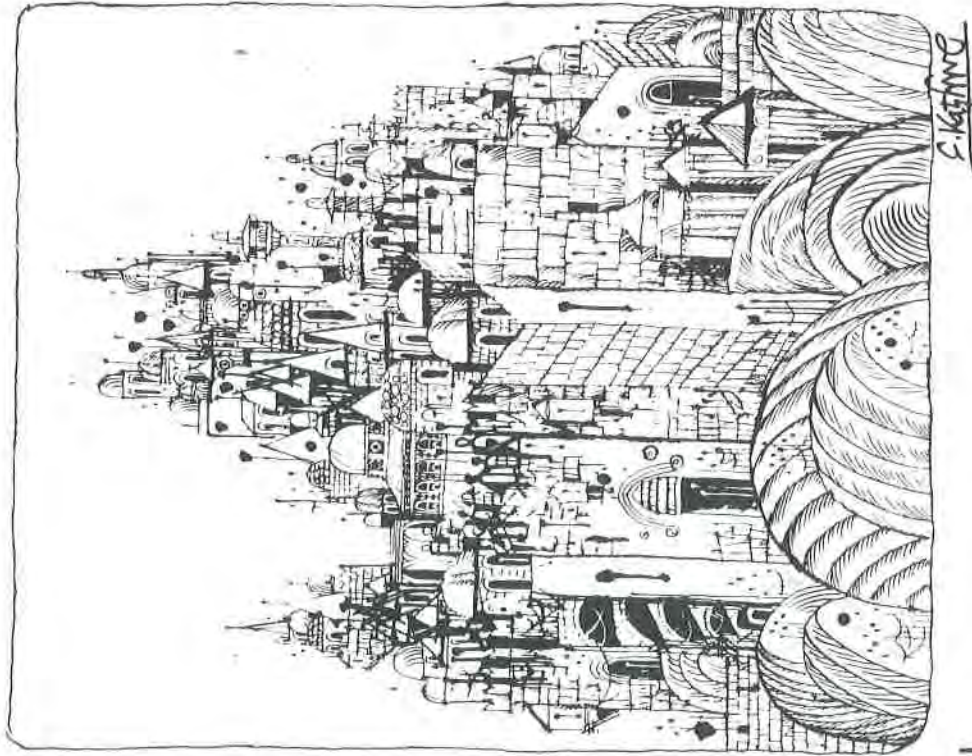
P.O.B. 50006, Tel Aviv 61500, Israel

Tel: (03) 654571 Tlx: 341171 KENS IL Fax: 972 3 655674



JERUSALEM

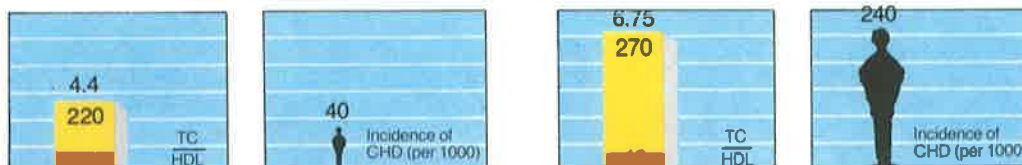
28 MAY - 1989
2 JUNE



LIPID DISTURBANCES DURING ANTIHYPERTENSIVE THERAPY MAY LEAD TO CORONARY HEART DISEASE

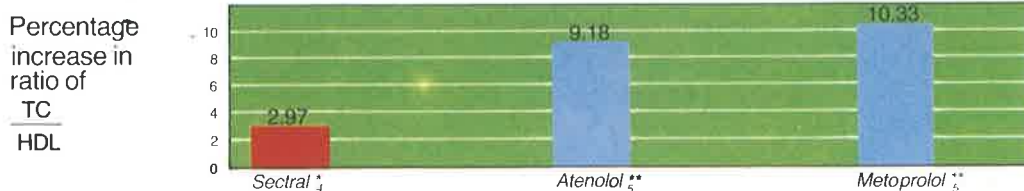
The Ratio $\frac{\text{TOTAL CHOLESTEROL}}{\text{HDL CHOLESTEROL}}$ is a Powerful Predictor of CHD Risk^{1,2}

as $\frac{\text{TC}}{\text{HDL}}$  CHD Risk 



Data from the Framingham Study and Pooling Project³

NOT ALL Antihypertensives Affect Plasma Lipids to the Same Degree



* after 6 months treatment
** after 3 months treatment

ONCE DAILY FOR HYPERTENSION

SECTRAL



acebutolol

the only beta-blocker with cardioselectivity and ISA which does not significantly alter plasma lipid levels.

References:

1. Miller, G.J. & Miller, N.E. (1975). The Lancet, 1, 16-19.
2. Castelli, W.P. et al. (1977). Circulation 55, 767-772.
3. Assman, G. (1982). "Lipid Metabolism and Atherosclerosis" Schattauer, Germany.
4. Lehtonen, A. (1984). Acta Med. Scand. 216, 57-60.
5. England, J. et al. (1980). Clin. Exp. Pharmacol. Physiol. 7, 329-333.

PRESCRIBING INFORMATION

Dosage: 400mg orally once daily at breakfast. If response inadequate after two weeks increase up to 800mg once daily at breakfast.
Contra-indications: Cardiogenic shock, heart block Sektal should not be used with verapamil or within several days of verapamil therapy (or vice versa). **Precautions:** In asthmatics; in pregnancy and those with blood pressures of the order of 100/60 or below. In the presence of bradycardia with catecholamine-depleting drugs such as reserpine; signs of heart failure; with insulin dependent diabetes and metabolic acidosis dosage adjustment may be required. If preferred discontinue 24-48 hours before anaesthesia. If a beta-blocker and clonidine are given concurrently, the clonidine should not be discontinued until several days after the withdrawal of the beta-blocker (see Prescribing Information on clonidine). **Side-effects:** Bradycardia, gastro-intestinal effects, depression have occurred infrequently. There have been reports of skin rashes/dry eyes associated with the use of all beta-adrenoreceptor blocking drugs, symptoms have cleared when treatment was withdrawn. Discontinuation should be considered if such reaction is inexplicable, cessation of therapy with beta-blockers should be gradual. Further information on request.

M&B May & Baker



M & B (Malaysia) Sdn. Bhd., P.O. Box 150, 46710 Petaling Jaya, Selangor. Tel: 03-7551355
May & Baker (Singapore) Pte. Ltd., Jurong Town P.O. Box 21, Singapore 9161. Tel: 02-656244