

# The Singapore Family Physician



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The College of General  
Practitioners Singapore  
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April/June 1985

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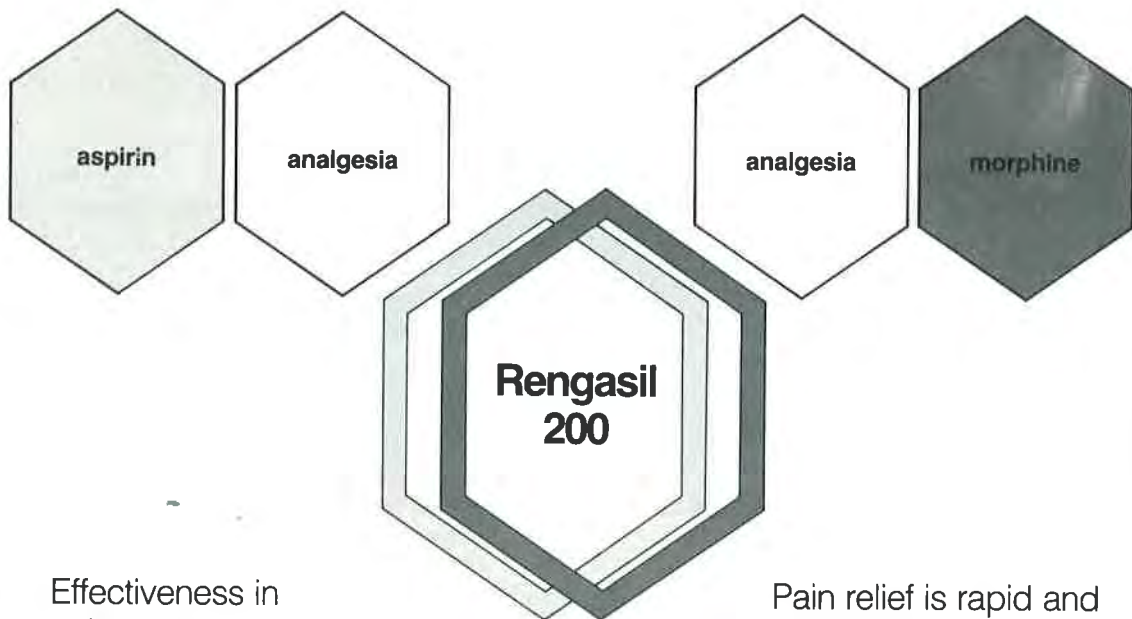
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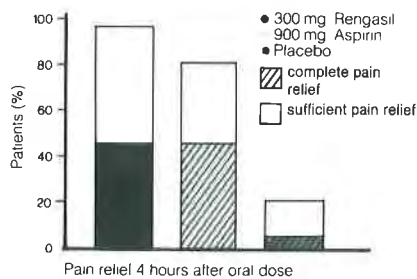
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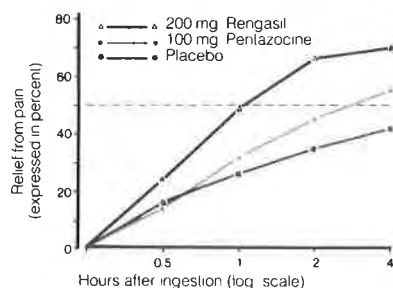
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<sup>1</sup> M. Hullin, K.-J. Olander. Comparison of piroprofen, acetylsalicylic acid, and placebo in post-operative pain after oral surgery

<sup>2</sup> Sperr W., In van der Korst, J.K. (Editor) A new antirheumatic-analgesic agent, piroprofen. Int. Symp., IXth Europ. Congr. Rheumatol. Wiesbaden 1979

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1. Graham DY et al.: Am J Gastroenterol 76(6): 500-505 Dec 1981

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\* WHO - International Code of Marketing of Breast Milk Substitutes, WHA 34.22, May 1981.

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## **TEACHING GENERAL PRACTICE**

The prime objective of the College of General Practitioners, perhaps its *raison d'être*, is the learning and teaching of General Practice.

The acceptance of the College, together with the Academy of Medicine, as an occupant in the former Faculty of Medicine Building in Sepoy Lines of ushers in a new chapter in its existence. This is going to be a major challenge for the College — to justify the space allocated in the Faculty of Medicine Building.

It is relevant therefore to examine the directions that the learning and teaching of General Practice have taken since the inception of the College and set our sights on the tasks that face us.

Strides have been made both in the post-graduate and undergraduate learning and teaching of General Practice, but more and bigger ones need to be taken.

### **Continuing Medical Education**

Since its inception the College has undertaken Continuing Medical Education programmes of varying degrees of sophistication and relevance. For several years now, it has run modules of CME. In recent years particular attention has been paid to topics that are of practical use to doctors in General Practice.

### **Voluntary Quality Assurance**

Attendance at CME courses will in the very near future be one yardstick to prove that doctors have engaged themselves in voluntary efforts of quality assurance and upgrading. The challenge to the CME Unit of the College will be to create innovative, interesting and high yield programmes that will make voluntary upgrading painless if not enjoyable.

### **Undergraduate GP Education**

Since the early 1970s undergraduates receive a one week immersion in General Practice. The scheme is run by voluntary GP teachers. Initially the programme consisted of attachment to clinics. Introductory lectures were later added. Since last year, a third segment has been

added, namely, 3 sessions of small group teaching and demonstration on the GP consultation conducted in a Government Polyclinic; demonstration cases were drawn from out-patient attending the clinics there.

Has the labour of the voluntary teachers been exercised in futility? Several teachers complained about the apathy shown by students posted to their clinics. Successive batches of students complained that the time slot given for the GP posting clashed with their social medicine projects. For some years now, lectures had to be given at night because there were no other time slots available; it is gratifying to note that this year, the University had allocated introductory lectures in the mornings instead. To be effective a teaching programme must have adequate University support. More support, encouragement and dialogue is required from the University if the authorities regard the teaching by GPs to be a necessary part of the sum total undergraduate experience.

In its aspirations to provide a relevant and effective undergraduate teaching programme, the last College Council undertook several measures. Teacher training was felt to be important. A workshop on teaching methodology was organised with the Institute of Education in 1983. Last year, Professor Edward Kowaleski of the Department of General Practice, University of Maryland was invited to give a weeklong workshop to our GP teachers. Much was learnt and many useful views exchanged.

Feedback surveys from medical students regarding their GP postings enabled Course organisers to streamline subsequent postings. The availability of the microcomputer has resulted in faster and more comprehensive analysis of such data.

Of equal import to University support and training in teaching methodology is the uniformity of the teaching content. To this end there is work to be done to hammer out an uniform and yet flexible teaching syllabus and teachers' detailed guide. There is a need to pool the

teaching experience and to capture this on paper, distil it and crystallise it into Teachers' Notes. Only then can there be uniformity in the teaching programme. Such an exercise too would help teachers to clarify in their minds the content of General Practice.

#### **Training for General Practice**

It is perhaps unfortunate that many hospital doctors have a stereotype perception that General Practice is medical practice at a spinal level. It is also unfortunate that this is to some extent true but what is important is that General Practice need not be that way. There is much to be learnt and taught about how to be more effective first line doctors.

Should not a doctor intending to go into General Practice go through a programme of rotation postings so that he is exposed to the breadth of medical practice to some depth? Many will be quick to rebut that much of the medicine learnt in the hospital context is not applicable to General Practice. It can however be equally well argued that hospital postings give depth to the GP's decision making efforts when faced with a problem. He will be in a better position to know how the patient can benefit from specialist help.

It is also necessary that every doctor intending to go into General Practice spend some time in the Accident and Emergency Unit and Outpatients.

An integrated programme can indeed be drawn up where each doctor desirous of going into General Practice go through these postings as well as the key hospital postings, and optional postings. There is no reason why proper-

ly planned, our Government Polyclinics cannot be training centres for medical excellence in Primary Care. It can be places for the meeting of minds of teachers from Government and Private Sectors as well as of undergraduates and post-graduates.

#### **A DEPARTMENT OF GENERAL PRACTICE — A Cry in the Wilderness?**

Should there be a Department of General Practice to co-ordinate and develop the teaching content relevant to both budding and practising General Practitioners? It could be a centre for developing medical excellence in Primary Care. It may be a little difficult for University and Ministry authorities to see the need and relevance of such a Department since most of them are hospital trained and have not had the experience of work as General Practitioners. General practice is more than concepts. It is a way of practice, with its specific problems, decision making processes and skills to be acquired.

One perceived difficulty of a budding University Department of General Practice is staffing. Perhaps this could be overcome by appointing part-time GP lecturers, readers and research fellows.

Until such time when a University Department of General Practice comes into being, the College will have to shoulder the tasks of organising undergraduate teaching. To assist Council in the development of the necessary teaching programmes perhaps the idea of appointing readers and research fellows charged with responsibilities to specific projects should be given further thought.

GLG

## ADDRESS

# HEALTH CARE: TO-DAY AND TO-MORROW

Dr V L Fernandez

I am indeed grateful for the great honour the Singapore Medical Association has done me in inviting me to speak to-day, albeit as a stand-in at so very short notice. My colleague and old friend, the President of the Singapore Medical Association has been lavish in his remarks. Standing up here, before this very distinguished and erudite audience, and looking back at the distinguished line of SMA Lecturers that have preceded me, I must confess that I have feelings of misgivings for having so audaciously agreed to speak at the behest of both, the President and the Organising Chairman of this SMA Silver Jubilee Committee.

Almost all previous SMA Lecturers have dealt with medical ethics, philosophy, the progress of medicine and recently the doctor-patient relationship. Due to constraints of time — five nights to be exact — what I have to say is not the result of scholarly research, nor even of systematic reading. My talk is skimpy in analysis and even lacks a theme. To-day I shall attempt to delve on some of my personal thoughts on such topics as diseases of affluence, health and productivity, medical education and training, primary health care in Singapore, and even try to take a glimpse into the future.

During the Silver Jubilee Convention of the Singapore Medical Association we should pause to reflect on the history it has built — a history which is varied and exciting. The Singapore Medical Association was inaugurated on 15 September 1959 and became the legal successor in Singapore to the Malayan Branch of the British Medical Association. Although its objectives are known to most of you, it is on this occasion worthy of reiteration:

(i) to promote and maintain the honour of

the medical profession

- (ii) to foster and preserve the unity and aim of purpose of the profession
- (iii) to voice its opinion and to acquaint the Government of the policy and attitudes of the profession
- (iv) to support a higher standard of medical ethics and conduct
- (v) to enlighten and direct public opinion on problems of health in Singapore

The Association has grown from year to year, its membership increasing from 433 in 1959 to 1,649 in 1985, representing 67% of the total doctor population to-day. As the national body it has taken pride of place in assisting the profession to adapt itself to changing circumstances as well as the humanistic and liberal aspects of the philosophy of the practice of medicine. In the next two decades the Association should direct itself to a wide based programme of community health education so as to avoid the pitfalls in health that other more affluent countries have gone through. More and more members should be involved in the community they serve, not only in the curative aspects, but also in health preventive and promotional work, as well as, health education. I believe that as a national body, the Singapore Medical Association will be only as persuasive in the Councils of Government as our influence and prestige in the community. This should be the direction and no amount of time spent in the waiting rooms of Ministers and Permanent Secretaries is a substitute for the demanding work of relating ourselves to the interests and aspirations of our increasingly sophisticated community.

The Singapore Medical Association has over the years proved itself worthy of its members' confidence and support. In the

years ahead it will be time for the members to show that they are deserving of the Singapore Medical Association — this means more active participation by members towards mobilising public opinion in health matters by activist leadership.

### **HEALTH PATTERNS AND ECONOMIC DEVELOPMENT**

There is high probability that developing countries will follow the mistakes of developed countries in allowing their citizens to form habits that lead to "diseases of affluence". By being aware of this risk and by taking advantage of the lessons from others, we in Singapore can prevent needless human suffering, losses in manpower and productivity, premature death and disability as well as unnecessary financial drains.

As our industrialization proceeds, and followed by a lag period of a decade we find that "diseases of affluence" have begun to emerge. These diseases are largely cardiovascular, as well as cancers and pulmonary afflictions related to the ready availability of fatty foods and processed foods, automobiles, alcohol and cigarettes. These goods are seen as symbols of affluence much to be sought after. The more educated and wealthier classes become the initial repository of these new illnesses. Within time, as affluence spreads throughout the population diseases of modern culture spread into the bulk of the population. Government has made vigorous attempts through health education to bring disease prevention possibilities to the public. More and more people in our society are now trying to change and adopt the innovation of becoming healthy. The ironic situation now arises in which the less educated, less motivated and the less affluent segments in our society have become the repository of the so-called "diseases of affluence".

There are also some social factors that confer risk on society, namely: violence portrayed in the mass media, the availability of alcohol, cigarettes and drugs and its abuse.

The medical profession has a major role in the creation of awareness and consensus formation among our national leaders and policy-makers. With foresight, energy, determination and national will, considerable foreseeable human suffering and economic loss

can be forestalled through intelligent planning and action.

### **HEALTH AND PRODUCTIVITY**

Health like productivity is an investment in human capital. Although a person's health is an emotional and personal matter, it is also the concern of a nation. A healthy workforce contributes to productivity and output. Time lost through absenteeism and sickness would undoubtedly lower productivity. Therefore in our drive for more productivity in the years ahead, the subject of health care as well as its development and availability is of vital issue. A healthy population brings along bigger monetary gains for the family and nation.

A very rough indicator of the general health conditions in a country is reflected in the infant mortality rate. In Singapore it declined from 20.5 per 1,000 in 1970 to 10.8 per 1,000 in 1981. Another yardstick, the maternal mortality rate declined from 36.3 per 100,000 in 1972 to 4.7 per 100,000 in 1981. These figures show on an overall basis the improvement in the general health status of our nation.

There are several questions that need analysis:

- What is the effect of health programmes on labour productivity.
- What contribution does better health make to the growth of the Gross National Product.
- Does increasing affluence contribute to changing health patterns, leading to new types of diseases.
- What strategy should we develop in the allocation of resources to achieve health for all.
- How many doctors, nurses, hospitals, etc do we need to-day, next year and towards the turn of the century.
- What effects do the methods of payment to doctors, nurses, etc have on their behaviour and attitudes.

All these questions and more need to be answered. However, health services account for 4.4 per cent of our total recurrent expenditure and it is axiomatic that not all can be done to give our people the full benefits of modern Medical Science. There are competing

demands of our limited resources, such as housing, education and other public services that are required to meet the basic needs of our people, and which are equally essential to make the work force more productive.

In the light of the current economic situation the medical authorities must be prepared to compete and argue for available resources and to strike a balance with the demands of the Social and Welfare Services. Medicine would become part of our expensive social structure within which the health service would have to fight for the resources it needs in the years ahead. Patients should come first in the organization of patient service. The priorities are health education and preventive medicine, care of children, occupational health, care of the mentally ill and handicapped, and care of the aged and chronic sick.

#### **EDUCATION AND TRAINING**

Medicine to-day stands at a vantage point from which changes, both good and bad, can be surveyed. If I appear to dwell on the bad, that fact does not mean that I do not recognize and welcome the great benefits that have accrued to us.

The concentration of both medical care and medical education in the hospital has influenced whole generations of physicians in their concepts of health and disease. The hospital tends by its very nature to separate the disease from the man and the man from his environment. It is not surprising, therefore, that the medicine of this century has been the medicine of entities rather than the medicine of relations and that modern medicine has neglected etiology in its widest sense. It has prepared the way for medicine to become a technology — the benefits of which have been reaped without steps taken to contain and control its negative effects.

The educationists in any medical school believe that every physician should be caring, compassionate and dedicated to patients — to keep them well and to help them when they are ill. Each should be committed to work, to learning, to rationality, to science and to serving the Society. Ethical sensitivity and moral integrity combined with equanimity, humility and self-knowledge are quintessential qualities of all physicians. They should now emphasise the acquisition and development of

skills, values and attitudes and limit the amount of factual information the students are expected to memorize.

The physician uses three kinds of knowledge — first information, second clinical craftsmanship which is a skill and third insight and awareness which is an integral part of the personality. These three kinds of knowledge are acquired in quite different ways. Information comes from observation, listening and reading; clinical skill, like other skills, comes from constant practice and the emulation of others; insight and awareness comes from human intercourse and deep reflection on the self and on experience. Excellence in one of these areas of knowledge does not in any way guarantee excellence in the others. One tends to think of poor physicians as badly informed physicians. But everyone has encountered superbly informed physicians, who can quote all the latest references, but are woefully lacking in clinical judgement, and also excellent clinicians who in their dealings with people are incredibly naive. Excellence in medicine requires a blend of all kinds of knowledge. Errors in medicine arise more often from a failure of skill or insight, than from a lack of information. A lack of information is most readily remedied by reference to a book or consultant. Defects of skill or insight are far more difficult to remedy — not least because the physician lacking self-knowledge cannot recognize his own failings. It is apparent the deepest and most vital knowledge — the knowledge that determines how information will be used — does not “explode” or “have a half-life of five years” as the catch words have it.

#### **(i) Training of Specialists**

Specialization means drawing a boundary or limiting a field. It can be depicted as a V-shaped wedge cut into the body of knowledge — the deeper the cut, or deeper the specialization, the better it is with more benefit for the patient. One operation surgeons function better than surgeons who do that operation occasionally. Specialization, therefore, implies depth, with vertical and hierarchical connotations. They have formal post-graduate programmes to become specialists. The structure of the specialities, the discipline acquired over years of study in well organized medical units, professional practice carried out in a well organized way,

working in a group with periodic attendance at seminars and congresses for updating knowledge, all contribute to self-control. When the specialities control themselves strictly, e.g. the surgeons safeguarding the standards of surgery, and the pathologists pathology, then Parliament, Government, the Singapore Medical Council and the public accept and endorse the solution. During the past 25 years hundred of our capable young doctors have obtained higher degrees, first overseas and later locally through the Postgraduate Medical School of the National University of Singapore in conjunction with the Academy of Medicine. In the next 25 years Singapore should establish itself as a major international medical centre. This should be in tandem with the growth of Singapore, which I envisage, would be one of the world's most advanced centres of industry, manufacturing, commerce, finance and technology.

#### (ii) Training of Family Physicians

The educational changes that have influenced the General Practitioner/Family Physician in developed countries during the past decade have been described as revolutionary. From a position during the sixties, when little if any, attention was paid to the specific training of the General Practitioner/Family Physician at either the undergraduate or graduate levels of medical education, training programmes in family medicine are now in the educational "limelight" — the in-thing in medical education. Great progress has been made to establish family medicine as a distinct educational discipline. Most medical schools in developed countries have University Departments of Family Medicine providing training programmes in Family Medicine with teaching responsibilities at both the undergraduate and graduate levels of medical education.

It must be understood that training in a medical specialty — as it is known to-day — cannot be applied "in toto" to the experience of being a family doctor. Learning to be a family doctor requires a change of perspective that can only take place where the perspective is dominant. It will also be apparent that attempts to produce a family doctor by putting together a conventional training in paediatrics and internal medicine — and adding some psychiatry — are doomed to failure. "The whole is different from the sum

of its parts". Family doctors may emerge in this way, as I did, but they will do so by the arduous route of rising above their training from their experience.

For many years now, we have talked about the establishment of a Department of Family Medicine in the National University of Singapore. Its role we have felt should not be just to expose undergraduates to general practice — then it has no right to exist at all. Its role should be to advance knowledge of general practice and to feed this into both undergraduate and postgraduate education in the discipline — and dare I say, to set standards in patient care. Its function would be involvement in patient care, at the highest possible standard, furtherance of the subject by research and teaching with the twin purposes of encouraging a spirit of enquiry amongst undergraduates and of providing for the training and postgraduate development of future academic practitioners of the subject. This is the role of academic departments in all other subjects. The time has arrived for the establishment of a Department of Family Medicine in the National University of Singapore.

As we design programmes suitable for the education of family doctors in Singapore, our educators must have a clear conception of the type of person they would like their students to become. The students should have deep commitment to people and obtain their greatest fulfilment to use technology with skill, but to make it always subservient to the interests of persons. We want doctors who can think analytically when analysis is required but whose usual mode of thought is multi-dimensional and holistic. We want doctors to be concerned with aetiology in the broadest sense and to be ever mindful of the need to teach their patients how to attain and maintain health; doctors who know themselves and can throughout their career recognize their defects, learn from experience and continue to grow as people and as doctors.

I am of the opinion that a doctor who has committed himself to a group of people and attained fulfilment by doing so, undergoes a gradual evolution of a sense of vocation — first, as a technical expert, a dealer in crises and emergencies, and then gradually beginning to perceive his role in terms of the human

relations that has been established. My observation from meeting large numbers of family doctors from all over the world is that the source of their fulfilment is the experience in human relations that medicine has given them.

### **PRIMARY MEDICAL CARE IN SINGAPORE**

In a modern environment like Singapore, with its high rise satellite towns and industrial centres, primary medical care should evolve an advanced system of health care and bring to bear advanced technology and skills to the health problem of the community. The approach should be family-based and community-orientated — especially when the three-tiered family is being encouraged and closer neighbourhood ties are being promoted by Government. It does not promise to be a cheap solution to safeguarding the health of a community, but it will certainly be the most cost effective, representing the most efficient way to utilise health resources.

The great majority of people seeking treatment for health problems are seen and treated without admission into a hospital. This has given an impetus to the search for improved management of disease through early diagnosis, management and treatment, so that as far as possible the individuals under care remain economically and socially active. The understanding of the cause of disease, the identification of controllable risk factors, the development of strategies to control these factors and the great advances of modern medicine in the last three decades have made possible the ambulatory care of a great many diseases for which there has been no effective treatment even in hospitals until a few years ago. The psychotropic drugs, the newer antibiotics, the steroids for systemic and dermatological use, beta blockers, beta-2 stimulants, home dialysis and effective immunization are a few examples of new developments that have transformed the prospects of primary medical care.

In order to take advantage of the great possibilities in medicine, it is necessary to train a new type of general practitioner whose training will combine therapy with the new concept of prevention and continuity of care that have become the hallmarks of family medicine.

Primary medical care must be the central axis on which the health services of a nation revolve. In 1980, according to the Ministry of Health Survey, fourteen million consultations were carried out at the primary care level of which about 70 per cent (approximately ten million) were conducted by the private sector. Only a very small proportion of all sick people (less than 10 per cent) needed the expensive technology of the hospitals, a fraction that can and must diminish with effective care at the primary level. This will enable the most effective utilisation of expensive hospital beds.

Our specialist colleagues in hospitals also need competent generalists in the community whom they can trust, so that they are not off loaded with unnecessary referrals. An important achievement of specialist medicine has been the shortening of hospital admission times, but early discharge depends on the consultants' ability to refer the patient back to a competent primary care doctor.

As health care becomes increasingly complex and fragmented it is vital that the patient has direct access to a doctor of first contact who is continually involved in his care, and who can share with the patient the responsibility for the maintenance of his health. The most appropriate person for this role is the family doctor whom the community expects to be knowledgeable, skillful, understanding and readily available. It is this community demand that will ensure the future of family medicine.

The challenge to-day is to provide good clinical care on average in our discipline as the consultants do in theirs.

Medical educators around the world have also acknowledged that it is just as essential for the family doctor to have comprehensive vocational training and to participate in continuing education as it is for the physician or surgeon. Without this he cannot fulfill his proper role in community health care. Indeed no doctor should engage in clinical practice unless he has had training appropriate to his responsibilities and unless he maintains and enhances his skills through regular assessment and continuing medical education.

### **INTEGRATED CARE**

In the years ahead we should raise the

standard of care of our patients through integrating the natural with the behavioural sciences. I appeal to the profession to set aside its guild mentality where trade rivalries threaten to overwhelm our concern for the patients' welfare. Ours is a noble profession, but it will not stay noble unless its members are individually seen to be noble in their aspirations and endeavours. We must find a way in which the family physician as well as the consultant specialist have an appropriate plan for in-patient care and can work together in a collegiate spirit. Every physician must expect to specialise, and as the hospital specialities divide into more concentrated and narrow areas of expertise, the greater will be the need for the integrated skills of the primary physicians providing continuing care.

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SMA Lecture delivered on 26 April 1985 at the Silver Jubilee National Medical Convention of the Singapore Medical Association.

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The Singapore Medical Association has come of age. During this, its Silver Jubilee Year, we as members of a single profession, should rally around and support the national body to succeed in the tasks that lie ahead.

Ladies and gentlemen, I have expressed some of my personal feelings and observations after thirty years of practice, both in institutional and private practice. Never in the short history of our island have the prospects been so bright and the challenges so great. May I urge you, therefore, to take heed of the wise words of the Bard...

*"There is a tide in the affairs of man,  
Which, taken at the flood, leads on to  
fortune;  
Omitted, all the voyage of their life  
Is bound in shallows and in miseries.  
On such a full sea are we now afloat,  
And we must take the current when it serves  
Or lose our ventures."*

**SHAKESPEARE**  
**Julius Caesar**



## **SENILE DEMENTIA — IS THERE HOPE FOR PREVENTION?**

**Dr B L Siow**

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### **INTRODUCTION**

*Senile dementia is often seen in the out-patient clinic at a far-advanced stage. With the rapid development of geriatric neurosciences, ageist attitudes need to be discarded and positive approaches to the management of senile mental decay must be explored.*

*At present there is some hope for prevention of senile dementia. The possibility of prevention involves two approaches: (i) the identification of the at-risk groups and (ii) the prevention of deterioration of the established cases. The responsibility of prevention involves the primary care physician who often encounters the early demented cases.*

### **DEFINITION**

According to DSM-III, senile dementia refers to the elderly with global intellectual impairment which interferes with social and occupational functions.<sup>1</sup> This may be associated with memory impairment, impaired abstract thinking, judgement and other higher cortical functions. The dreaded disease affects 5-15% of the elderly.<sup>2</sup> There is a dramatic rise with age and the incidence plateaus off after 85 years.<sup>3</sup> According to Fries et al,<sup>4</sup> epidemiological evidence shows a compression of senescence with more and more elderly living to 80-90 years but may die after 90 years old. Thus if the

onset of dementia can be delayed by 10 years, the tragic morbidity of senile dementia can be improved.

### **CAUSES**

There are 3 major causes of senile dementia. (1) Senile Dementia of Alzheimer's Type (SDAT), (2) Multi-infarct Dementia (MID), (3) Secondary Dementias. There is at present some hope for prevention in the (2) and (3) categories but active research in SDAT may soon unravel the possibility of prophylaxis in this grey area.

### **PREVENTION OF AT-RISK GROUPS**

#### **Roth's Threshold Phenomenon**

According to Roth, pathological changes associated with SDAT such as senile plaques and neuronal losses may be present to a lesser extent in the normal elderly.<sup>2</sup> The difference lies mainly in the quantitative aspect. Above the threshold of ten plaque counts, the elderly are at a greater risk of manifesting the clinical features of senile dementia. Minor metabolic insults may tip the borderline cases into the demented range.

At present it is difficult to detect this at-risk group except by postmortem biopsy. The *CTscan* may assist in the diagnosis of cerebral atrophy but this does not equate with senile dementia. A recent Swedish study quantitatively measured the degree of cerebral atrophy by the indices of ventricular dilatation and cortical atrophy.<sup>5</sup> The study showed that the SDAT and MID groups have greater degrees of cortical atrophy as shown by the indices though some overlap occurs between the early ones and the normal elderly. More specific and sensitive techniques may in future assist in the early detection of dementia. The *Positron-Emission Tomography Scan* which

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measures cortical glucose metabolism, is a promising radiological method for future evaluation.<sup>6</sup>

#### (1) Multi Infarct Dementia (MID)

The threshold phenomenon can be more practically applied to the MID category. Dementia begins to manifest when more than 50 cc. of cerebral tissue are infarcted.<sup>2</sup> *Prevention of MID* thus lies in the *prevention of stroke occurrence and recurrence*. Early detection and treatment of *geriatric hypertension* is essential.<sup>7</sup> The recent Framingham Study showed that systolic hypertension contributes to more morbidity and mortality than diastolic component in the geriatric age-group.<sup>7</sup> Systolic hypertension should be managed as actively as diastolic hypertension but the overall benefits of management are still under evaluation.

The second preventable aspect of MID is the category of *Non-Valvular Atrial Fibrillation (NVAF)*. Patients with NVAF have 5-7 times increased risk of stroke compared with age-matched patients.<sup>8</sup> Once the stroke has occurred, 10-20% will reemolise within the first two weeks.<sup>9</sup> The prevention of NVAF-related stroke and MID lies at two levels: (i) the prevention of NVAF by adequate control of Cardiac failure and hypertension. (ii) the prevention of stroke recurrence in those with NVAF-related strokes. The question of anticoagulating the non-stroke elderly with NVAF is debatable but recent evidence supports early anticoagulation of those who have developed NVAF-related strokes provided that the blood pressure is less than 180/100 mmHg and the size of the infarct is less than 3 cm.<sup>10</sup>

#### (2) Senile Dementia of Alzheimer's Type (SDAT)

*Primary prevention of SDAT* is still not feasible as the etiology is unknown. Clinical research has shown a consistent *cholinergic deficiency* in SDAT.<sup>11</sup> Unfortunately trials of choline and lecithin treatment of established cases of SDAT have yielded unfavourable results as these are often given at the stage when too many neurons have been destroyed.<sup>11</sup> Future prospective trials should concentrate on choline and lecithin prophylaxis in the normal elderly.

#### PREVENTION OF DETERIORATION OF ESTABLISHED DEMENTED

Much more can be achieved for *the prevention of deterioration of established demented* cases. To be effective this must be done early. Any reversible cause of dementia will inevitably become irreversible if neglected for too long a period.

#### Diagnosis

The *diagnosis of early senile dementia* is a challenging task to the primary care physician. The following *differential diagnoses* need careful exclusion before the diagnosis is made:- Benign senescent forgetfulness/delirium/depression/aphasia and late onset-schizophrenia.

#### (1) Senescent Forgetfulness

*Senescent forgetfulness* can be benign or malignant. The malignant form interferes with other cognitive functions and runs a progressive course.<sup>12</sup> A six month observation period is necessary before a final conclusion is made.

#### (2) Delirium

*Delirium* in the elderly is often of acute onset and associated with fluctuating level of consciousness. In contrast dementia is of gradual onset and the patient is relatively alert. If doubt exists as to the diagnosis, it is safer to assume the diagnosis of delirium and investigate thoroughly as delirium in the elderly is a medical emergency which is potentially reversible. However, both condition may co exist together but the treatment of the physical condition may help to alleviate the underlying demented condition.

#### (3) Depression

*Depression* has often been misdiagnosed as senile dementia in 10% of cases.<sup>13</sup> This may be further complicated by the evidence that 20-30% of demented have coexisting depression in the early stages.<sup>13</sup> The following features may help to support the diagnosis of depression.<sup>14</sup>

- (i) Symptoms of short duration and onset with precision.
- (ii) Patient complains much of cognitive loss but there is incongruence between the detailed complaints and mental performance on psychological tests.

- (iii) A past history of depression may be present.

A trial of antidepressant maybe indicated if depression is suspected but these patients need to be hospitalised and carefully observed for the next few weeks as the anticholinergic side-effect of antidepressants may worsen the condition if it is actually senile dementia. Low dose imipramine is useful as it relieves the depression and improves any coexisting incontinence due to dextrusor instability. The dexamethasone suppression test may be useful to distinguish pseudodementia from dementia but false positives sometimes render the test unreliable.<sup>14</sup>

At the moment there is *no satisfactory objective means to diagnose early cases of senile dementia*. The early stages may be elusive as functional problems such as depression are common and patient's denial is often excessive. Clinical judgment and observation of the patient is necessary during the subsequent follow-ups.

## PREVENTIVE MEASURES

### (1) Reversible Factors

Once the diagnosis of senile dementia is made, the *reversible factors* must be actively pursued and excluded such as normal-pressure hydrocephalus, subdural haematomas, drug-induced dementia electrolyte imbalance, nutritional and endocrine factors. In the presence of the aging brain, *minor multiple deficits* such as mild anaemia, mild renal impairment and mild hypoxemia may have a deleterious cumulative effect and these need early correction even when they appear trivial.

### (2) Neuromodulators

The *use of vasodilators for MID* is questionable. Patients with MID have arteriosclerotic vessels which can only move inwards than outwards.<sup>15</sup> Thus the so-called vasodilators may not produce any further beneficial effects unless they have a metabolic enhancing effect.<sup>15</sup>

As for *SDAT, neuromodulating drugs* which aim at increasing acetylcholine levels in the brain, have been tried with variable results.<sup>11</sup> These include choline and lecithin (precursor therapy), physostigmine (acetylcholinesterase inhibitor) and arecholine (direct muscarinic agonist). The latter two produce severe muscarinic side-effects at the

therapeutic dose and their usefulness is thus limited. Choline and lecithin have also limited success because (i) these drugs have been tried on the more advanced group of senile dementia with few remaining normal neurons left. (ii) choline has a biphasic response on the memory system. Cholinergic stimulation may improve memory but a slight excess may impair it. (iii) at present there is no ideal neuropsychiatric assessment method which can objectively measure and compare the degree of mental impairment and improvement with the drugs.<sup>11</sup> Other drugs such as ergoid mesylates and Piracetam have been used widely for the elderly with cognitive decline. These drugs act mainly by their metabolic enhancing effects rather than by vasodilatation. Vasopressin may be the first neuropeptide for use in the demented elderly.<sup>16</sup>

### (3) Reality Orientation

Though geriatric neuromodulation remains in its infancy, the more established approach of *Reality Orientation (RO)* has been used for many years in the rehabilitation of the confused elderly.<sup>17</sup> RO techniques aim at improving the cognitive functions of the elderly by way of behavioural re-education, environmental manipulation and mental stimulation of the elderly. It can be individualised to the patient's needs either by a 24-hour informal RO or formal stepped exercises.

## CONCLUSION

As the mysteries of SDAT are being unravelled slowly, neuromodulating drugs may in future play both therapeutic and prophylactic roles in the management of senile dementia. But for time being we must stress on the prevention of stroke occurrence and recurrence in multi-infarct dementia and the prevention of deterioration of the early established cases especially those with potentially reversible factors. □

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## **INDUSTRIAL ACCIDENTS — AN INVESTIGATORY APPROACH**

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### **SYNOPSIS**

A total of 214 cases of accidents from TSL a Singapore industrial company were studied over the period 1981 and 1982.

### **INTRODUCTION**

*Every accident brings a measure of distress to the victim and this often affects all the other members of his family. Where there is permanent disability, the consequences may well be disastrous for the victim and his family for he loses his earning capacity and ability to enjoy a normal active life. The loss of productivity will affect the national economic well being too.<sup>1</sup>*

*During the five year period from 1976 to 1980, the total number of accidents in Singapore rose from 18,192 to 22,023 and the amount of worker's compensation awarded rose from \$12.96 million to \$17.5 million.<sup>2</sup>*

*This study attempts to examine the characteristics of work accidents in a Singapore factory, TSL during the period 1981 to 1982 with the purpose of recommending measures to decrease the work accident rate.*

*The characteristics studied were: nature of injury, type of injury, site of injury, day of week of injury, estimated time loss, and injuries occurring within or outside normal working hours.*

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*A determined Safety Campaign was carried out in TSL from 1st August to 31st December 1981 after a factory inspectorate made several visits to the factory because of the high accident rates in 1979 and 1980. The study also examines whether there was a significant reduction in the number of accidents after this safety campaign.*

*Since 1st August 1981 pre-employment medical examinations were done with more detail and with the intention of correct pre-placement of new workers. Also several employees who were particularly accident prone were shifted to areas with fewer accident hazards.*

*All apprentices go through an intensive one week programme on safety practices. This includes films, slide shows, booklets and lecture notes.*

*On the job training on safety is provided for apprentices and newly-qualified mechanics. Older foremen and supervisors who are resistant to new ideas on safety matters were gradually persuaded to accept new safety work practices.*

*Spot-checks are made to ensure proper housekeeping, and the use of personal protective methods.*

*Protective equipment are provided free by the company and faulty ones replaced.*

*Defective and unsuitable tools are replaced by new ones.*

*All accidents are investigated and problems rectified. The results of the investigation are made known to the worker concerned so that he would be more safety conscious in future.*

*Counselling services were started for those with 3 or more work injuries in a year. Areas looked into included family, social, mental, economic, inter-personal relationships and morale.*

### MATERIALS AND METHODS

The study population constitute the workforce from the Parts, Field, Workshop and Marine and Oil Field Support Services. The actual work done in these services are similar, and it was not necessary to categorise the different workers. Besides workers are sometime shifted from one group to another whenever there are shortfalls in any group. Basic training in all departments ensures that they could work in any department.

Information was also collected regarding personal particulars such as date of birth; number of working hours which included overtime; number of workers involved in accidents; number of workers at work each month regardless of whether they suffered work injuries or not; number of accidents per month; accident characteristics such as nature of injury, parts of the body involved, type of injury and agency of injury; and consequence of accident such as man-days lost or day charged.

The study involves a retrospective examination of accident prevalence in TSL in 1981 and 1982. This period was further divided into periods before and after the safety campaign which lasted from July to December 1981, inclusive.

The entire data processing for this study was done using the SPSS package on the National University of Singapore IBM 3033 Computer.

### RESULTS

Altogether there were 214 accidents in TSL during the period 1981 to 1982. During this period, there were no deaths, permanent total or partial disabilities. All accidents were temporary disabilities or medical treatment injuries.

There was a monthly average of 242 workers in TSL during the period 1981 to 1982. 134 of these workers were involved in accidents in the same period, some more than once but none exceeding 4 accidents.

It will be seen from Table 1 that the workforce is a relatively young one with 62.4% younger than 35 years of age. In terms of length of employment 78.7% had less than 12 years experience of work in this factory. (Table 2)

**TABLE 1  
PERCENTAGE DISTRIBUTION OF  
ALL WORKERS BY AGE**

Age (Year)	Number	Percentage
< 20	1	0.4
20-24	74	26.1
25-29	60	21.2
30-34	42	14.8
35-39	19	6.7
40-44	21	7.4
45-49	33	11.7
50-54	27	9.5
55-59	6	2.1
Total	283	99.9

**TABLE 2  
PERCENTAGE DISTRIBUTION OF ALL  
WORKERS BY LENGTH OF EMPLOYMENT**

Length of Employment (Year)	Number	Percentage
< 3	59	20.8
3- 5	55	19.4
6- 8	37	13.1
9-11	72	25.4
12-14	31	11.0
15-17	4	1.4
18-20	9	3.2
21-23	10	3.5
24+	6	2.1
Total	283	99.9

Table 3 shows that the number of accidents in November is very low adding up to 3.3% of the total.

As indicated in Table 4, Saturdays and Sundays are normally holidays except when there is a need for overtime work, so that comparisons cannot be made. Fridays has the lowest accident frequency figure, half that of Monday's and less than half of Wednesday's

rates. Perhaps this is due to the coming week-end which normally boosts morale. Monday has the second highest accident frequency at 22%. It is probably an anti-climax to the week-end.

**TABLE 3**  
**FREQUENCY DISTRIBUTION OF ACCIDENTS**  
**BY MONTH IN 1981 AND 1982**

Month	Number of Accidents			Percentage
	1981	1982	Total	
January	18	5	23	10.7
February	16	3	19	8.8
March	18	9	27	12.6
April	8	9	17	7.9
May	12	10	22	10.3
June	12	4	16	7.5
July	14	3	17	7.9
August	10	6	16	7.5
September	11	7	18	8.4
October	10	6	16	7.5
November	5	2	7	3.3
December	11	5	16	7.5
Total	145	69	214	100.0

**TABLE 4**  
**DISTRIBUTION OF ACCIDENT FREQUENCIES**  
**BY DAY OF WEEK**

Day of Week	Number of Accidents	Percentage of All Accidents
Monday	47	22
Tuesday	41	19
Wednesday	54	25
Thursday	33	15
Friday	23	11
Saturday	5	2
Sunday	14	6

One would expect the rate of accidents to be higher during overtime work due to physical and psychological fatigue. However when comparison is made between number of accidents to number of hours worked during normal working hours and during overtime in Table 5, there appears to be no significant difference. Perhaps, the higher salary paid during overtime work had negated the effects of fatigue. Also overtime work is often done outside the factory workshop in the field where groups of 2 or 3 workers are sent to

repair tractors. It is postulated that the 'camaraderie' developed in a closer work relationship results in a healthier work attitude. For these reasons, overtime accident frequency figures may have been prevented from exceeding that of normal working hours.

**TABLE 5**  
**A) BREAKDOWN OF TOTAL WORKING HOURS BY**  
**NORMAL AND OVERTIME WORKING HOURS IN**  
**1981 AND 1982**

	Working Hours		
	Normal	Overtime	Total
Hours Worked	609505	158415	767920
Percentage of Total Hours Worked	79.4	20.6	100.0

**B) BREAKDOWN OF ACCIDENTS BY NORMAL**  
**AND OVERTIME WORKING HOURS**

	Working Hours			Total
	Normal	Overtime	Unknown	
Number of Accidents	140	29	48	217
Percentage of All Accidents	64.5	13.4	22.1	100.0

During the 2 year period, no worker suffered more than 4 accidents. Only 11.9% experienced more than 2 accidents.

There was only one worker below 20 years of age and he suffered from an accident. These are shown in Tables 6 and 7 below.

**TABLE 6**  
**DISTRIBUTION OF ACCIDENT FREQUENCIES**  
**PER WORKER IN 1981 AND 1982 (THOSE WHO**  
**DID NOT EXPERIENCE WORK INJURIES**  
**ARE EXCLUDED)**

Number of Accidents	1	2	3	4
Number of Workers	93	25	14	2
Percentage of Workers	69.4	18.7	10.4	1.5

**TABLE 7**  
**DISTRIBUTION OF ACCIDENT SPELLS BY AGE AND THE**  
**AGE-SPECIFIC ACCIDENT INCIDENCE**

Age (Year)	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
Number of Accidents	60	43	32	12	16	25	20	5
Percentage of all Accidents	28.0	20.1	15.0	5.6	7.5	11.7	11.7	3.0
Accident Incidence × 1000	72.3	64.0	68.0	57.0	66.7	67.6	67.6	71.4

Accident incidence refers to the number of accidents divided by the average number of workers exposed multiplied by 1,000. As can be seen in Table 7, there is no appreciable difference in the incidences among the various age groups.

Next, an analysis was made to examine whether experience of the worker could affect the frequency of accident. Again 2 sets of values were computed.

**TABLE 8**  
**A) ACCIDENT FREQUENCY BY LENGTH OF EMPLOYMENT**  
**B) ACCIDENT INCIDENCE BY LENGTH OF EMPLOYMENT**

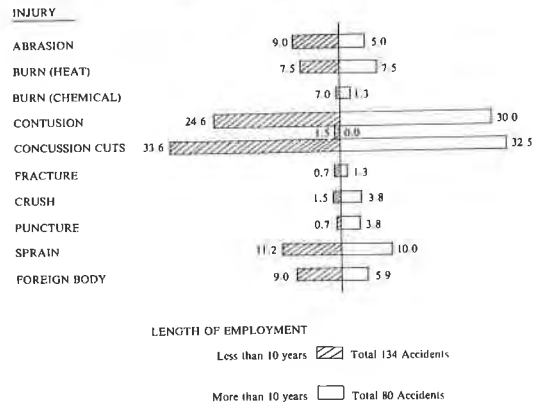
Length of employment (year)	< 3	3-5	6-8	9-11	12-14	15 <sup>a</sup>
Number of Accidents	59	41	25	53	19	17
Percentage of all accidents	27.6	19.2	11.7	24.8	8.9	7.9
Accident Incidence × 1000	100.0	74.5	67.6	73.6	61.3	58.6

Length of employment had been calculated exactly from the day the worker joined the workforce up to the day of the accident. From Table 8, it can be seen that as the length of employment, and therefore experience, increased, the rate of accident generally decreased. It is significant that all 59 employed for less than 3 years experienced work injuries. The management should perhaps attach more importance in placing new workers under the tutelage of the more experienced workers who have had at least 5 years of employment.

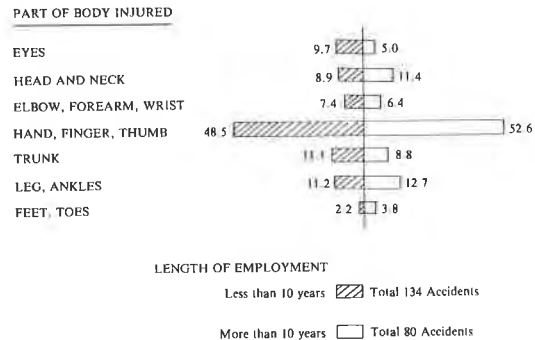
As seen in Figure 1, cuts occurred most often. This is not surprising as the workers used many sharp and pointed handtools for work. Contusions stand out too as the worker is often knocked by or knocked against objects.

As seen in Figure 2, there is a much higher percentage of eye injuries affecting those workers with less than 10 years experience. This is probably due to the less experienced workers not understanding the importance of using machine guards and of using personal eye protective equipment such as safety goggles

**FIGURE 1**  
**PERCENTAGE DISTRIBUTION OF ACCIDENTS BY INJURY AND LENGTH OF EMPLOYMENT SHOWN BY A BAR CHART**



**FIGURE 2**  
**PERCENTAGE DISTRIBUTION OF ACCIDENTS BY PART OF BODY INVOLVED AND LENGTH OF EMPLOYMENT AS SHOWN BY A BAR CHART**



gles during welding, chipping and grinding.

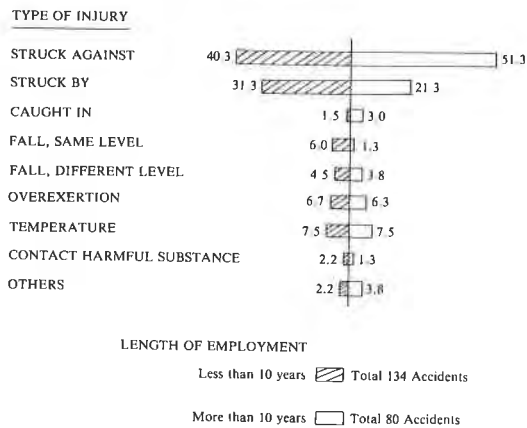
When the overall distribution was examined, hands, fingers and thumbs injuries constituted about half of all injuries. This is understandable as most work involved the use of hands and handtools. It follows then that efforts in injury prevention should be directed here.

Overall, 'struck against' and 'struck by' accidents constituted 72.0% of all injuries. This again is not to be unexpected as handtools are often used. Oily hands and handtools often slip and result in cuts. Remedial efforts should be concentrated on this problem. All mechanics and workers should be taught how to use and maintain their tools properly. Supervisors and foremen should see to it that all defective equipment be replaced.

Next, accident rates were calculated. For each rate, 2 values are given, one for all accidents and the other for accidents where



FIGURE 3  
PERCENTAGE DISTRIBUTION OF ACCIDENTS BY TYPE OF  
ACCIDENT AND LENGTH OF EMPLOYMENT AS SHOWN BY  
A BAR CHART



more than 3 days medical leave are given. The latter are accidents which are legally required to be reported to the Ministry of Labour.

#### Accident Frequency Rate

$$= \frac{\text{total number of accidents in a given period}}{\text{total number of man-hours worked in the same period} \times 1000000}$$

#### Accident Incidence Rate

$$= \frac{\text{total number of accidents in a given period}}{\text{average number of workers exposed in the same period}} \times 1000$$

#### Accident Severity Rate

$$= \frac{\text{total number of man-days lost from accidents in a given period}}{\text{total number of man-hours worked in the same period}} \times 1000000$$

#### Number of days charged per accident spell

$$= \frac{\text{total number of man-days lost due to accidents in a given period}}{\text{total number of accidents in the same period}}$$

It will be seen in Tables 9, 10 and 11 that all the accident rates were much higher in the period before the safety campaign (August to December 1981) than after it. In addition, the number of man-days lost per accident spell was also higher in the period before the safety campaign than after it. It could generally be inferred that the safety campaign was a success.

The accident frequency rates for reportable accidents seemed excessively high in Table 12. However, it must be taken in the light that all accidents were included in this

TABLE 9  
ACCIDENT FREQUENCY RATES

	All Accidents	Reportable Accidents (Medical Leave > 3 days)
1981 and 1982	279	60
1981 January to July inclusive	410	54
1982	197	28

TABLE 10  
ACCIDENT INCIDENCE RATES

	All Accidents	Reportable Accidents (Medical Leave > 3 days)
1981 and 1982	36.8	7.9
1981 January to July inclusive	55.1	7.3
1982	25.0	5.6

TABLE 11  
ACCIDENT SEVERITY RATES

	All Accidents	Reportable Accidents (Medical Leave > 3 days)
1981 and 1982	800	555
1981 January to July inclusive	1210	777
1982	420	210

TABLE 12  
MAN-DAYS CHARGED PER ACCIDENT SPELL

	All Accidents	Reportable Accidents (Medical Leave > 3 days)
1981 and 1982	2.9	9.2
1981 January to July inclusive	2.9	10.2
1982	2.1	7.5

study, as long as it happened during working hours. Thus a worker who fell in the toilet is also classified as a work injury.

## SUMMARY AND CONCLUSION

A total of 214 cases of accidents from TSL were studied over the period 1981 to 1982. The cases were obtained from the medical records of workers.

The lowest accident frequency was recorded for the month of November, constituting only 3.3% of all work injuries, although the number of man-hours worked was not less.

Fewer accidents occurred on Fridays.

Accident Frequency Rates during regular working hours and overtime were about the same.

During the period 1981 to 1982, of all accidents studied, only 11.9% of these workers suffered more than 2 accidents.

Age was shown to be not an important factor in determining accident rates.

Experience played a significant part in determining frequency of accidents. All 59 workers with less than 3 years experience suffered injuries while only 58.6% of those with more than 15 years experience met with accidents.

Of the accidents studied, about one-third suffered cuts while about one-quarter had contusions.

The anatomic sites most affected were the hand, the finger and the thumb and they constitute 50% of all injuries.

The type of injuries most commonly experienced were 'struck against' and 'struck by' objects, constituting 72%.

The Accident Frequency Rate, Accident Incidence Rate and Accident Severity Rate were much lower after the safety campaign than before it.

Number of man-days lost per accident spell was also lower after the safety campaign than before it.

To completely eliminate accidents is to aim for the impossible. However efforts can and should be directed in reducing them. Safe work methods go a long way in achieving this. In addition, as shown in safety campaigns, other methods could be just as successful. Pre-employment and periodic medical examinations help to fit the right man to the right job. Safety education, good housekeeping, knowledge and application of safe work methods, use of protective equipment, application of ergonomics, a responsible and committed management, are the right ingredients in achieving results.

Investigation and analysis of accidents help to pin point areas of weakness and therefore areas where improvement can be most made.

It may be concluded from this study that concerted efforts to prevent accidents can be successful, not only in terms of accident frequency rates but also in accident severity rates and in number of man-days lost per accident spell.

More efforts should be directed at areas where accidents were more frequent such as hands and fingers being cut by handtools and knocked by machines. Also the more experience workers could spend more time in educating the inexperienced ones in safety.

## ACKNOWLEDGEMENT

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## **ACQUIRED IMMUNODEFICIENCY SYNDROME — (AIDS)**

**Dr T Thirumoorthy**

— Information guide for primary health care physicians.

### **BACKGROUND AND DEFINITIONS**

AIDS was first recognised as a new syndrome in 1981 after an unexpected number of patients with Kaposi's sarcoma and pneumocystis carinii pneumonia were reported among young, previously healthy homosexual males.

The definition of a case of AIDS by the Center for Disease Control (CDC) in the United States is "a reliably diagnosed disease that is moderately indicative of an underlying cellular immune deficiency, occurring in a person with no known cause of diminished resistance to the disease".

This profound failure of the cellular immune system predisposes the individual to a wide range of unusual diseases particularly malignancies such as Kaposi's sarcoma and opportunistic infections such as Pneumocystis carinii pneumonia.

Although the number of patients affected with AIDS is increasing globally, no cases of AIDS have been reported in Singapore.

### **ETIOLOGY**

Early epidemiological evidence points to a virus whose transmission involved direct intimate contact with mucosal surfaces and/or exposure to blood or semen with an AIDS sufferer or carrier.

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*Paper presented at  
The Workshop in STD organised by  
Middle Road Hospital on 20.1.1985  
at the Singapore General Hospital*

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Presently there is strong evidence that the etiologic agent is a lymphocytotropic retrovirus or a closely related group of such retroviruses designated:-

— LAV/ IDAV (lymphadenopathy-associated virus/immunodeficiency-associated virus by the Pasteur Institute in Paris)

and

— HTLV III (Human T-cell lymphocytotropic virus III by the National Cancer Institute in Bethesda, USA)

The lymphocytotropic viruses have cytopathic effect on lymphocytes. Among the ensuing immunologic abnormalities that characterize AIDS the major ones are lymphopenia, selective decrease in number and functional capacity of the helper/inducer subset (OK T4) of T-lymphocytes and an associated elevated serum immunoglobulins.

### **PERSONS AT RISK**

The persons most at risk of acquiring AIDS are:

- \* Male homosexuals
  - with anal intercourse
  - multiple sex partners (more than 60 years)
- \* Promiscuous bisexual men
- \* Intravenous drug users
  - sharing needles
  - males and females

The others at risk include:

- \* Haemophilics
  - exposure to pooled blood products
- \* Females with bisexual partners
- \* Children

- with parents at risk for AIDS
- blood transfusion
- \* Selected Racial Groups
  - Haitians
  - Central Africans (Zaire, Rawanda)
  - heterosexuals transmission in the African group
- \* None of the above

### CLINICAL PRESENTATION AND FEATURES

The hallmark of AIDS is deficiency in the T-lymphocyte arm of immune systems. Since there is no pathognomonic clinical presentation for AIDS the primary health care physician should suspect AIDS in "at risk group" with symptoms and signs of a marker disease. The two most common 'marker' diseases are —

- 1) Kaposi's Sarcoma (unusual malignancy)
- 2) Pneumocystis carinii pneumonia (opportunistic infections)

Exclude those patients with a known cause of immunodeficiency either congenital or acquired (such as prolonged immunosuppressive or cytotoxic therapy).

#### Kaposi's Sarcoma (K.S.)

- macular, papular or indurated skin lesions
- purplish or reddish blue in colour
- single or multiple. Skin and mucus membranes
- the tumour may spread to the gastrointestinal tract lymph nodes, liver, spleen and lungs
- benign indolent K.S. affecting the skin on the legs of men over 50 is known to occur. This is not the picture of AIDS
- other unusual malignancies associated in AIDS are Primary Lymphoma of the brain and non-Hodgkin's lymphoma

#### Pneumocystis Carinii Pneumonia (PCP)

- frequently presents with a dry unproductive cough; progressive shortness of breath; associated fever, night sweats and malaise
- chest X-ray may appear normal but typically shows bilateral interstitial infiltrates

- other opportunistic infection in AIDS patient include Mycobacterium avium — intracellulare, cytomegalovirus (CMV), intractable herpes simplex virus, cryptococcal meningitis, disseminated toxoplasmosis oropharyngeal and esophageal candidiasis and others

### AIDS Related Complex (ARC)

In addition to the classical presentation of AIDS (KS with PCP or other opportunistic infection) reports of less clearly defined syndromes in persons at risk suggests there is a spectrum to AIDS. Part of the spectrum is now being referred to as AIDS Related Complex (ARC). Present evidence suggests up to 15% patients with ARC develop AIDS.

Some of the clinical features of ARC are:-

- \* Malaise — extreme fatigue
- \* Fever, Night sweats
- \* Weight loss (10% body weight)
- \* Persistent diarrhoea
- \* Generalised lymphadenopathy
- \* Muco-cutaneous candidiasis

No marker diseases are found in these patients. Many of them show immune defects similar to those AIDS patients.

### SUSPICION OR RECOGNITION OF AIDS AT PRIMARY HEALTH CARE LEVEL

#### History

Recognition of persons in the high risk groups

- (a) intravenous drug abuse
- (b) blood transfusions
- (c) homosexuals
  - frequency. No. of partners
  - sexual contacts from or in epidemic areas like New York, San Francisco, London, etc.
- (d) bisexuals
  - sexual contacts in epidemic areas
- (e) heterosexuals
  - sexual contact in epidemic areas, Central Africa, Caribbean
- (f) female patients with bisexuals partners

Symptoms suggestive of PCP or ARC:

**Examination**

- (a) Visual examination of skin and oral mucosa for violaceous lesions
- (b) Oro-pharynx for thrush
- (c) Persistent ano-rectal herpes simplex ulcerations
- (d) Palpation of all lymph nodes for lymphadenopathy and for hepatosplenomegaly

**Investigations**

- (a) WBC with differential count
- (b) Smear for candida from the oral mucosa
- (c) Stool for ova cyst in patients with diarrhoea
- (d) A chest X-ray
- (e) Sputum examination for Acid Fast Bacilli

If the above information is suggestive of AIDS the patient should be referred to a specialist unit for further investigation.

**ADDENDUM**

Since the presentation of this paper in January 85, we have been informed by the National Cancer Institute in USA that they have found 3 sera positive for the HTLV-III antibodies among the sera of high risk group sent to the NCI.

The HTLV-III antibody test is presently available to patients at the Government and Private pathology laboratories. This ELISA based tests are subject to false positives and even false negatives. At the present state of knowledge, a positive test would need to be confirmed by the Western Blot type of test. The blood test results must again be interpreted in the light of the clinical state of the patient. Physicians requesting this test should equip themselves to manage the patient medically, socially and psychologically in event of the antibody test is positive. ■

## CHLAMYDIA TRACHOMATIS INFECTION — THE CHALLENGE OF THE '80s

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### INTRODUCTION

*Chlamydia trachomatis* may appear a sort of strange terminology to many a physician. It is really no stranger. *Chlamydia trachomatis* infection has been known for long as a leading preventable cause of blindness in many developing countries. What is new is its revelation as a sexually transmitted disease causing a myriad variety of serious conditions in men, women and children. It is now regarded as the most common sexually transmitted disease in the Western industrialised countries.<sup>1</sup> WHO experts have recently reported from Montreal that at least 3 to 5 million women in the United States are being infected with *Chlamydia trachomatis* each year and the disease has reached almost an epidemic proportion.<sup>2</sup>

One would naturally wonder how is it possible that a problem of such magnitude as this has not been identified much earlier. Two factors are mainly responsible. Firstly, symptoms caused by *Chlamydia trachomatis* are often so subtle that patients do not seek medical advice. Secondly, the bacterium is difficult to grow in most laboratories. In addition to these, awareness among physicians of

*chlamydial* cause of non-specific genital infection was also poor until recently. Dr Ward Cates Jr, Head of the Division of Sexually Transmitted Diseases of the Center for Disease Control (CDC) in Atlanta has been quoted as saying "Most physicians went to medical school when it was not recognised, one would have trouble spelling it, much less treating it"<sup>3</sup>

### MICROBIOLOGY

*Chlamydia trachomatis* is an obligatory intracellular bacterium. Fifteen serotypes have been recognised of which D-K are the sexually transmitted agents.

Since they do not contain an enzyme system capable of generating ATP, they depend upon the host cells for nutrients and energy. They are bacteria-like in the sense that they contain DNA and RNA, have a rigid cell wall, multiply by binary fission and are susceptible to some antibiotics. However, they differ from bacteria in that they need viable cells for their multiplication and survival and can be grown only in tissue culture media.

The infection takes place when the infective *Chlamydia* particle — the elementary body — attaches itself to the specific attachment site of the susceptible host cells. *Chlamydia* then enters the body of the host cells by a process of enhanced phagocytosis.

*Chlamydiae* remain within the phagosome throughout their growth cycle and counteract phagolysosomal destruction. The elementary bodies reorganise themselves into what are known as reticulate bodies. The latter are the metabolically active replicating form of the organism. The reticulate bodies continue to divide for about 24 hours within the phagosome and they coalesce to form elementary

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### CLINICAL CONDITIONS CAUSED BY CHLAMYDIA TRACHOMATIS

Men	Women	Men and Women	Children
<ul style="list-style-type: none"> <li>▪ Urethritis</li> <li>• Epididymitis</li> <li>▪ Prostatitis</li> </ul>	<ul style="list-style-type: none"> <li>• Acute urethral syndrome</li> <li>• Bartholinitis</li> <li>• Cervicitis</li> <li>• Endometritis</li> <li>• Salpingitis</li> <li>• Fitz-Hugh-Curtis Syndrome</li> <li>Possible:                             <ul style="list-style-type: none"> <li>• Premature labour</li> <li>• Still births</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Proctitis</li> <li>• Inclusion-conjunctivitis</li> <li>• Endemic trachoma</li> <li>• Lymphogranuloma-venereum</li> <li>Possible:                             <ul style="list-style-type: none"> <li>• Endocarditis</li> <li>• Meningo-encephalitis</li> <li>• Reiter's Syndrome</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Inclusion conjunctivitis</li> <li>• Pneumonia</li> <li>• Otitis media</li> </ul>

bodies. The infected cell expands as the population of the Chlamydial particles increases and ultimately ruptures. The disseminated elementary bodies infect new cells and the cycle starts anew. The duration of this life cycle is about 48 hours.

#### TRANSMISSION

The commonest mode of transmission is sexual. However, the babies born of mothers harbouring cervical Chlamydia have a 60-70% risk of acquiring the infection during their passage through the birth canal.

#### LABORATORY DIAGNOSIS

Victims of Chlamydial infection may remain totally symptomless for years. Symptoms when present are often subtle and have no definite patterns. The physician, therefore, has to depend heavily upon laboratory diagnosis. A high index of suspicion is, however, crucial to diagnosis.

The intracellular nature of the organism and its unique life cycle would make one think that a cytological diagnosis of the infection from the scrapings of the conjunctiva or cervix would be appropriate. In practice, however, sensitivity of this method is poor and cannot be recommended.<sup>4</sup>

Similarly, serologic diagnosis of Chlamydial genital infection is also not very reliable despite the fact that there is an abundant cell-mediated immune response to Chlamydial infection. This is due to the fact that there is a high background rate of antichlamydial antibody in sexually active population.<sup>5, 6</sup> However, in some specific instances, a very high antichlamydial antibody titre or paired sera showing rising titre may point towards a diagnosis. Two serologic tests are used in this

regard — compliment fixation test and micro-immunofluorescence test. The latter is much more sensitive than the former.

The optimal laboratory diagnosis, therefore, depends upon the culture of the organisms on a cell monolayer and identifying the Chlamydial inclusion bodies. The cell monolayer used is usually cycloheximide-treated McCoy cells. They are stained by iodine or Giemsa stain. The presence of fluorescence inclusions under the darkground microscope confirms Chlamydial infection. This is the most reliable of all the available methods but the sensitivity is still in the order of 80%. This method of diagnosis is labour-intensive and takes about 3-7 days.

Recently, two other forms of laboratory diagnosis have been made commercially available. They are quick, reliable and technically easy to perform. One of them is "Micro-Trak Method" (Syva, USA) using fluorescein-labelled monoclonal antibodies. The result is available in less than an hour. The other is devised by Abbott Laboratories of North Chicago. It takes 3½-4 hours for the result and is said to be better suited for testing a large number of people.

#### TREATMENT

A course of tetracycline, 250-500 mg 6 hourly for 7-14 days is effective. In pregnant women and where tetracycline is contraindicated, erythromycin in similar dosage can be given. Sulphisoxazole 2 g a day in divided doses can also be administered. Bowie has demonstrated equal efficacy with tetracycline, erythromycin and sulphisoxazole.<sup>7</sup>

#### PROBLEMS AND CHALLENGES

Given the numerous complications of

Chlamydia trachomatis infection and the morbidity associated with these complications, it leaves no doubt that each country needs to determine its prevalence rate. The problem is that the patient is often asymptomatic and the facilities for culturing these organisms are not widely available. Newer methods of laboratory diagnosis are quicker to perform but are still too costly for widespread use.

However, the cost as such should not be a deterrent in pursuing research in this field. The cost of not treating the disease may prove to be a lot more in economical terms as well as in the sense of human suffering than the cost of screening large sections of the population.

Since Chlamydia trachomatis is a sexually transmitted microbe, one may mistakenly assume that it should concern mainly the physicians in the VD clinics. A considerable percentage of cases of known gonococcal infection also have concomitant Chlamydial infection. These patients are usually adequately investigated, their contacts traced and treated. Patients with non-gonococcal urethritis often receive tetracycline therapy irrespective of the cultures. Here also Chlamydial infection is adequately treated.

The crucial role in the spread of the disease is, therefore, played by the apparently asymptomatic non-prostitute population, in whom the incidence of gonorrhoea is very low. In Singapore, we found an extremely low incidence of gonorrhoea in the sexually-active non-prostitute women.<sup>8, 9</sup> However, our preliminary study indicated that Chlamydial infection in this group of patients was strikingly high.<sup>10</sup>

It is high time that we should endeavour to study this potential problem and determine our position. In this regard, pregnant women should be the first target group in as much as

they are instrumental in the propagation of the disease by both vertical and horizontal transmission. An enthusiastic, systematic, concerted study using newer Chlamydial technologies in large number of patients is warranted. It is in this mood of facing the challenge, that a possible potentially disabling problem of the society can be averted to the benefit of one and all.

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## DRUGS AND PREGNANCY

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### INTRODUCTION

*Drug use in pregnancy is a difficult therapeutic area because the drug effect has to be considered in both the mother and foetus. In addition, apart from a few drugs which are 'proven' teratogens and some which are 'suspects', for most of the drugs there is scanty information regarding their safety for use in pregnancy. It is not surprising that most drugs carry a disclaimer like "Safety for use in pregnancy has not been established". The disclaimer may serve to protect the manufacturer but it serves only to frustrate physicians who are trying to assess the risk of the drugs to the foetus.*

### FOETAL RISKS

What are the risks of drugs to the foetus? Besides causing malformation, drugs may have other effects on the foetus such as abortion, prematurity, low birth weight, perinatal mortality and morbidity, cancer and functional defects. To the lay public and, perhaps to some physicians as well, drugs are the major causes of malformation. This is a misconception as drugs are probably responsible for less than one percent of the observed foetal malformations. In 65 percent of the cases the etiology is unknown; autosomal inheritance together with cytogenic causes account for approximately 25 percent of the foetal malformations; maternal diseases and infections account for the remaining 9 per

cent. Teratogenic effects are obvious but some of these other effects are subtle or because of the time period between drug administration and the manifestation of the effect, are difficult to associate with the drug. A good example is the association of diethylstilboestrol and the development of adenocarcinoma of the vagina. Female patients exposed to diethylstilboestrol in utero only begin to manifest signs of adenocarcinoma of the vagina when they are 15 to 22 years old. Therefore, in considering all possible effects, the potential risks to the foetus exposed to drugs in utero are significant (see table).

### FACTORS TO CONSIDER

#### (1) Stage of Embryonic Foetal Development

Most drugs cross the placenta and reach the foetus, though the rate may be different for different drugs. In general unionised, lipophilic drugs such as phenytoin and sulphonamides cross the placenta membrane readily. The factors involved in the maternal-foetal distribution of drugs are very complex and depend on changes in the maternal-foetal physiology at different stages of pregnancy. The effect of the drug on the foetus therefore depends not only on the stage of the pregnancy but also the route of administration, dose and duration of therapy. The stage of embryonic development when organogenesis of the heart, gut, skeletal system, muscle and central nervous system takes place is the critical period for teratogenicity. A teratogenic drug given during this period may cause malformation of any of the systems. For humans the most vulnerable period for teratogenicity is from the third to the eleventh week of pregnancy. For practical purpose, this would be the first trimester. This is also the period when some patients may not even know that they are pregnant. Therefore, it is imperative that physicians taking care of female patients in the reproductive age group,

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routinely question the patient about her last menstrual cycle (or possibility of pregnancy) before prescribing a drug. This may avoid treating the patient with a potentially teratogenic drug inadvertently.

Though after the first trimester the risk of malformation may be reduced, the foetus is still vulnerable to the other adverse effects of drugs. These adverse drug effects may be peculiar to the foetus or may be similar to those produced in adults. For example, aminoglycosides when administered to the pregnant patient during the second or third trimester may cause damage not only to the eighth nerve of the mother but also the foetus. An example of a drug in which the adverse effect is seen in the foetus but not the mother is tetracycline. If tetracycline is administered to the mother during the fourth month of gestation when calcification of the first dentition occurs in the foetus, it may cause discolouration of the teeth and enamel hypoplasia. Tetracycline is also deposited in bony tissues and may cause retardation of bone growth in the foetus.

## (2) DRUG KINETICS

Another factor that should be taken into consideration when administering drugs to the pregnant patient is that during intra-uterine life the foetus is dependent on the mother for elimination of any drug that gets into its system. At birth, however, when the foetus suddenly becomes a neonate it then has to handle whatever drug that is in its system on its own. The neonate's immature metabolic and excretory capacity may not be able to eliminate the drug rapidly and this can result in drug toxicity. For example, if the mother is given large doses of diazepam near term, the newborn may have poor suckling reflex, hypotonia and hypothermia. As the neonate's metabolism of diazepam is slow due to hepatic immaturity, these effects will be prolonged for a week or more.

An aspect of therapeutics where data is scanty is the dose requirements of the pregnant patient. In prescribing for the pregnant patient, she is often treated like any other non pregnant patient. However, as pregnancy progresses, there are changes in gastrointestinal function, plasma volume and renal blood flow. These physiological changes may affect the pharmacokinetics of the drugs. It has been

shown that the pharmacokinetics of drugs like phenytoin and ampicillin change in pregnancy. Therefore more work is required in this area in order to have a rational basis for dose prescription in pregnancy. Until more data is available, the physician should be aware that the pregnant patient may have different dose requirements.

## SUMMARY

In summary the following points are worth considering when treating patients in the reproductive age group:

1. No drug is completely safe in pregnancy.
2. No drug should be prescribed to the pregnant patient unless the benefits clearly outweigh the potential risks, to both the foetus and the mother.
3. If possible all drugs should be avoided during the first trimester.
4. When prescribing for the female patient in the reproductive age group, always check on the possibility of pregnancy.
5. When a drug is indicated, one which has been prescribed widely and considered relatively safe in pregnancy should be used instead of new drugs or drugs in which there is scanty information due to limited use.

## APPENDIX

### DRUGS AND PREGNANCY

Drug	Adverse Effects and Comments
<b>Analgesic, Antipyretic</b>	
Salicylate	(a) Has been implicated in some studies as being teratogenic but not confirmed by others. <sup>1</sup> (b) Avoid in late pregnancy because of risk of: delayed onset and prolonged labour; intracranial haemorrhage in neonates especially premature babies. <sup>2</sup>

Paracetamol	Used widely in pregnancy. In therapeutic doses, no clear association with teratogenicity has been found to date.
<b>Antihistamine</b>	Tetratogenicity not proven in humans though some preparations are teratogenic in animal studies. <sup>1</sup>
<b>Vitamin</b>	
A	Large doses possibly teratogenic <sup>2</sup>
D	Large doses possibly teratogenic <sup>3</sup>
13-cis-retinoic acid	Teratogenic: central nervous system malformations <sup>2</sup>
<b>Diuretic</b>	May cause reduction of plasma volume and placenta perfusion. Not recommended for treatment of hypertension or oedema in pregnancy. <sup>4</sup>
Thiazide	Antenatal exposure: 1) may cause neonatal thrombocytopenia 2) Has been associated with neonatal hypoglycaemia and hyperbilirubinaemia 3) Decreased birth weight.
<b>Antihypertensive</b>	
Propranolol	Has been associated with intrauterine growth retardation. Neonatal-respiratory depression, bradycardia and increased perinatal mortality. <sup>3,4</sup>
Hydralazine	Safety in pregnancy not established. One study showed a small increase in birth defects. <sup>2</sup>
Methyldopa	Widely used to treat hypertension in pregnancy. No significant malformations has been associated with its use in pregnancy to date. <sup>3,5</sup>

- Antiepileptic**
- (a) In patients with epilepsy benefit of treatment outweighs risk to the foetus.<sup>2</sup>
  - (b) All anticonvulsant drugs increase the risk of congenital abnormalities.
  - (c) Combined antiepileptic therapy has been associated with greater occurrence of congenital malformations than monotherapy.<sup>3</sup>

Phenytoin } Congenital malformations:  
Phenobarbitone } "Foetal hydantoin syndrome"<sup>3</sup>

Carbamazepine Risk of teratogenicity  
Sodium valproate Risk of congenital abnormalities (particularly neural tube defects) not proven but probably true.<sup>6</sup>

Trimethadione } Should be avoided and  
Paramethadione } other drugs prescribed if treatment is indicated because of association with congenital malformation and high perinatal mortality.<sup>3</sup>

**Psychotropic Drugs**

- Diazepam (a) Risk of cleft lip ± cleft palate if exposure occurred during the first trimester.<sup>3</sup>  
(b) Withdrawal effects and drowsiness in neonates.<sup>2</sup>

Imipramine Possible association between maternal ingestion and foetal malformations suggested by several studies.<sup>3</sup>

Phenothiazines Exposure during the first trimester may be associated with a higher incidence of teratogenicity.<sup>3</sup>

Lithium Teratogenic risk: Congenital heart disease.<sup>2</sup>

**Anticoagulant**

Warfarin Congenital malformations.

Should be avoided at any period of gestation and heparin should be used if anticoagulation is indicated.<sup>3</sup>

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**Antimicrobials**

Aminoglycoside	Risk of 8th nerve toxicity to mother and foetus. <sup>2</sup>
Tetracycline	Discolouration of teeth, enamel hypoplasia and retardation of bone growth. <sup>4</sup>
Sulphonamides	Neonatal haemolysis. Risk of kernicterus in neonates. <sup>2</sup>
Trimethoprim	Possible risk of teratogenicity. <sup>2</sup>
Cotrimoxazole	Combination of sulfamethoxazole and trimethoprim. Best avoided especially in first trimester because

of possible risk of teratogenicity. However, to date there has been no direct clear evidence associating its use in pregnancy and foetal malformation.

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**Note:** *The drugs in the table are just examples of the various effects on the foetus. Absence of a drug from the table does not imply safety.*

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# MULTIPLE CHOICE QUESTIONS

## DRUGS AND PREGNANCY

Answer True (T) or False (F) the following questions.

1. The following statements apply to the use of drugs in pregnancy
  - (a) drugs can have harmful effects on the foetus at any time during pregnancy ( )
  - (b) the risk of teratogenicity is greatest during the 3rd to the 11th week of pregnancy ( )
  - (c) drugs are the major causes of foetal malformations ( )
  - (d) the adverse effects of a drug on the foetus is only dependent on the stage of the pregnancy when it is administered ( )
  
2. In the treatment of hypertension in pregnancy
  - (a) the drug of choice is a diuretic ( )
  - (b) propranolol may be prescribed as there is no adverse effects on the foetus ( )
  - (c) methyldopa has not been associated with significant foetal malformations ( )
  - (d) thiazide has been associated with neonatal thrombocytopenia ( )
  
3. The following statements apply to the management of the epileptic pregnant patient
  - (a) the benefit of treatment outweighs the risk of teratogenicity ( )
  - (b) combined antiepileptic therapy has less risk of teratogenicity than monotherapy ( )
  - (c) all anticonvulsant drugs increase the risk of teratogenicity ( )
  - (d) trimethadione should be avoided because of risk of teratogenicity and high perinatal mortality rate ( )
  
4. The following statements apply to the passage of drugs across the placenta
  - (a) most drugs cross the placenta easily ( )
  - (b) lipophilic drugs cross the placenta more readily ( )
  - (c) drug passage across the placenta occurs mostly by passive diffusion ( )
  - (d) the ionised form of a drug cross the placenta less readily than the non-ionised form ( )

Answers:  
 1. (a) T; (b) T; (c) F; (d) F  
 2. (a) F; (b) T; (c) T; (d) T  
 3. (a) T; (b) F; (c) T; (d) T  
 4. (a) T; (b) T; (c) T; (d) F

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## BOOK REVIEW

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### CLINICAL KNOWLEDGE AND EDUCATION FOR GENERAL PRACTICE

*Occasional Paper 27*  
*Royal College of General Practitioners*  
*Dr. HWK Acheson & Ms Margaret H Henley*

The Editor's preface to this paper states that "its publication...is the culmination of a long process of assessment involving several editorial advisers whose opinions were divided". The reasons for divided opinions and the final decision to publish provide an interesting preliminary to the contents.

This paper is based on a research approach directed to three groups of doctors. Through the use of postal questionnaire with open-ended questions, the authors from the University of Manchester sought as the principal objective to evaluate the clinical knowledge of general practitioners on common clinical conditions. Seven clinical conditions were chosen as the basis of investigation namely:-

acute otitis media,  
jaundice,  
iron-deficiency anaemia,  
transient cerebral vascular insufficiency,  
infections mononucleosis,  
pulmonary infarction and  
cancer of the prostate gland.

Admittedly the number of consultants in the specialities concerned and collectively regarded as one group was small (only 10). Their responses to the questionnaires were used as yardsticks rather than as statistically significant data. The other two groups of doctors were a randomly determined group of GPs and a con-

stant group of experienced GPs who were or had been trainers.

The investigation revealed "predictable" responses, "surprising" responses, responses showing "good awareness of probability and risk" as well as responses suggesting "gaps in the clinical knowledge of GPs." The last point is cause for concern. The three groups of people who should be particularly concerned with the findings are:-

1. Those who have to do with undergraduate medical education,
2. Those who have to do with vocational training &
3. Those who have to do with continuing medical education.

The implications of the findings are covered by the authors in the concluding part of the paper and the reader will appreciate how important the results of the research are to the GPs. The intellectual bigot may use the revelation of "gaps in the clinical knowledge of GPs" in the investigation to denigrate General Practice. However the investigation resulting in the discovery of deficiencies is a serious study to mirror what the authors were particularly concerned with i.e. the clinical knowledge of GPs. Improvement and raising the standards of clinical knowledge of GPs can only come about when the areas of deficiency are known. Feedback information can be useful or detrimental depending on how it is used and who uses it. Some use it wisely to change for the better. Some use it to belittle and to scorn but betraying instead the smallness of their minds. Were editorial advisers worried by this aspect of revelation?

I have spent some time going through the questions in each of the seven common clinical conditions mentioned. They are indeed extractive and specially relevant to General Practice. Perhaps the authors may want to make this form of questioning as the basis or modality of learning other common clinical conditions in General Practice.

LVC

## NEWS FROM THE COUNCIL

### 1. TENTH COUNCIL

At the 14th Annual General Meeting of the College of General Practitioners Singapore, held on Sunday, 26 May 1985, the following office-bearers were elected to the Tenth College Council (1985-87):

President	— Dr Victor L Fernandez
Vice-President	— Dr Alfred W T Loh
Honorary Secretary	— Dr Goh Lee Gan
Honorary Treasurer	— Dr Paul S M Chan
Council Members	— Dr Sivakami Devi Dr Omar bin Saleh Talib Dr Soh Cheow Beng Dr Tan Kok Yong Dr Henry P H Yeo

At the 1st Meeting of the 10th Council held on 26 May 1985, after the A.G.M., the following were appointed to Council:

Censor-in-Chief	— Dr Lee Suan Yew
Honorary Editor	— Dr Moti H Vaswani

### 2. STANDING COMMITTEES

To assist Council the following Standing Committees will be formed. Members who wish to sit in any of these committees please contact the Secretariat. Your names will be forwarded to the respective Committee Chairman. Council looks forward to your contribution.

- (i) Board of Censors
- (ii) Continuing Medical Education Committee
- (iii) Undergraduate Teaching Unit
- (iv) Vocational Training Unit (Task Force)
- (v) Publications Committee
- (vi) Finance Committee
- (vii) Research Committee
- (viii) Practice Management Committee

### 3. SURGERY UPDATE

The next update course will be held at the PATHOLOGY LECTURE THEATRE, Singapore General Hospital, Outram Road, Singapore 0316, from 9.00 — 10.30 p.m.

## PROGRAMME

<b>Date</b>	<b>Topic</b>	<b>Lecturer</b>
5.7.85	Congenital Surgical Conditions	Mr V T Joseph MBBS, FRACS, M Med (Surg)
12.7.85	Cardiac Surgery	Mr Joseph H Sheares MB, B Chir (Camb), FRCS (Edin)
19.7.85	Minor Orthopaedic Surgical Conditions	Mr Yeo Khee Quan M Med (Surg) FRCS (Edin), M Ch Orth
26.7.85	Surgical Anal Conditions	Prof Foong Weng Cheng MB (Melb), FRCS (Edin), FRCS (Eng)
2.8.85	Urogenital Stones	Mr Jimmy Beng Kian Siew MBBS, M Med (Surg), FRCS (G), FRCS (E)
9.8.85	<b>PUBLIC HOLIDAY – NO SESSION</b>	
16.8.85	Clinical Approach to: (i) Breast Lumps (ii) Thyroid Lumps	Mr Chan Kong Thoe MBBS, MD, FRCS (Eng), FRCS (Edin)
23.8.85	Clinical Approach to Neckache	Assoc. Prof Robert Pho Wan Heng MBBS, FRCS (Edin)
30.8.85	Head Injury	Mr James Khoo Chee Min MBBS, FRACS

Have you registered yet? For information please contact the GPS Secretariat Tel 2230606.

#### 4. New Members

The following have been accepted by Council into membership of the College during April/  
May 1985:

Dr Goh Kong Tek	Ordinary Membership
Dr Ling Sing Lin	Ordinary Membership
Dr Ng Chee Chai	Ordinary Membership
Dr Tan Kian Yong	Ordinary Membership
Dr Chee Guat Ching, Caroline	Associate Membership
Dr Liang Hsueh Lin	Associate Membership
Dr Tan Ee Ling	Associate Membership
Dr Toh Kok Thye	Associate Membership





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11th Conference of  
the World Organisation  
of National Colleges,  
Academies and  
Academic Associations  
of General Practitioners/  
Family Physicians

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Barbican Centre for Arts and  
Conferences  
London 1-6 June 1986

Patron: Her Majesty the Queen

**Host College**

The Royal College of General Practitioners

**The final announcement**  
for **WONCA 1986,**  
including details of

- ★ THE CALL FOR PAPERS
- ★ REGISTRATION
- ★ HOTEL ACCOMMODATION
- ★ SOCIAL EVENTS AND TOURS
- ★ ACCOMPANYING GUESTS' PROGRAMME  
IS NOW AVAILABLE

For full details please contact:

**The College of General Practitioners  
Singapore**

Alumni Medical Centre  
4-A College Road, Singapore 0316

**Conference Secretariat:**

CONFERENCE ASSOCIATES WONCA  
27A Medway Street, London SW1P 2BD  
United Kingdom

Telephone 01-222 9493  
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**Bridging anxiety**

- Specific anxiolytic action with no undesirable sedation
- Very rapid onset of action
- Constant effect
- Simple dosage, easy for the patient
- Very good tolerability
- Easy to discontinue

# Lexotan

Roche

— the facts speak for themselves

#### Composition

«Lexotan» contains per tablet 1.5, 3 or 6 mg 7-bromo-1, 3-dihydro-5-(2-pyridyl)-2 H-1, 4-benzodiazepin-2-one (bromazepam).

#### Properties

«Lexotan» is a powerful psychotropic agent. In low dosage, it selectively reduces tension and anxiety. In high dosage, sedative and muscle-relaxing properties appear.

#### Indications

*Emotional disturbances.* Acute tension and anxiety states. Difficulties in interpersonal contact. Agitation, insomnia. Anxious, agitated depressive reactions.

*Functional disturbances in the cardiovascular and respiratory systems* (pseudoangina pectoris, precordial anxiety, tachycardia, emotiogenic hypertension, dyspnea, hyperventilation); *in the gastrointestinal system* (irritable bowel syndrome, epigastric pain, spasm, bloating, diarrhea, etc.); *in the genitourinary system* (frequency, irritable bladder; dysmenorrhea).

*Psychosomatic disorders.* Psychogenic headache. Psychogenic dermatosis.

*Asthma.* Gastric and duodenal ulcer, ulcerative colitis.

*Emotional reactions to chronic organic disease.*

*Adjuvant to psychotherapy in psychoneurosis.*

#### Contraindication

Myasthenia gravis.

#### Dosage

*Average dose for outpatient therapy:* 1.5–3 mg up to three times daily.

*Severe cases, especially in hospital:* 6–12 mg two or three times daily.

These amounts are average recommendations, and dosage should be individually determined. Treatment of outpatients in general begins with the lowest dose, gradually increasing if necessary to the optimum level.

After about three to six weeks, according to progress in therapy, dosage can usually be gradually reduced and then stopped.

#### Side effects

«Lexotan» is well tolerated. Side effects such as fatigue, drowsiness and rarely muscle weakness can occur with high doses. No evidence of toxic effects on the blood, or on liver or kidney function has been revealed by the clinical experience.

#### Precautions

Elderly and debilitated patients require cautious dosage because of individual variations in sensitivity to psychotropic medication.

If «Lexotan» is combined with other centrally acting drugs such as neuroleptics, tranquilizers, antidepressants, hypnotics, analgesics and anesthetics, it should be borne in mind that pronounced sedation may result. This intensification can sometimes be exploited therapeutically. On prolonged treatment in high dosage, as with all hypnotic, sedative and tranquilizing preparations, dependence may develop in susceptible individuals.

With «Lexotan», as with other psychoactive substances, patients should avoid taking alcohol while under the influence of the treatment, since the individual response cannot be foreseen. Like all medicaments of this type, «Lexotan» may modify the patient's reactions (driving ability, behaviour in traffic, etc.) to a varying extent depending on dosage, administration and individual susceptibility. During long-term treatment, regular blood counts and liver function tests should be performed.

Laboratory studies have revealed no signs of noxious effects with «Lexotan» on fetal development. However, the established medical principle of prescribing medicaments in early pregnancy only when absolutely indicated should be observed.

As it cannot be excluded that the active substance passes into the breast-milk, it is recommended that infants of nursing mothers taking «Lexotan» regularly should be weaned.

#### Packs

Tablets 1.5 mg

Tablets 3 mg

Tablets 6 mg

100, 500, 1000

100, 500, 1000

100, 500

«Lexotan» is a Trade Mark



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TABLETS

# Moduretic

(hydrochlorothiazide-amiloride HCl, MSD)

# diuretic

consider the logic in prescribing

## Moduretic

### smooth, controllable attainment of 'dry weight'

with convenient daytime (12-hour) diuresis encouraging acceptance of medication

### conservation of body potassium

making supplementary potassium unnecessary †

### increased protection for digitalised patients

as the preservation of potassium reduces the risk of hypokalaemia-induced cardiac arrhythmias

### simple dosage schedule

and lower overall tablet intake combine to promote patient compliance

†Both potassium supplements and potassium-sparing agents are contraindicated.



# Moduretic

(hydrochlorothiazide-amiloride HCl, MSD)

# diuretic

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SHARP  
DOHME  
INTERNATIONAL  
Kenilworth, NJ, U.S.A.  
Frankfurt, F.R.G.

Note: Detailed information is available to physicians on request.

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1-78 MUE 77-Au-17.(e)

# Beta Blockers May Keep Him Out of the Running

"...beta blockers blunt normal cardiovascular response in patients who exercise to a significant degree.

Therefore, the beta blockers are not usually indicated for physically active hypertensive individuals."<sup>1</sup>



For active hypertensives  
when you want to conserve potassium

PRESCRIBE  
**Dyazide**  
50 mg triamterene  
and 25 mg hydrochlorothiazide

- permits normal circulatory responses to exercise
- maintains blood pressure within desired limit
- reduces possibility of muscle cramps associated with thiazide-induced potassium loss
- encourages compliance through economy and once-daily dosing

<sup>1</sup> Lowenthal D T: Exercise in hypertension: Postgrad Med.: Special Report, Mar 1983.

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