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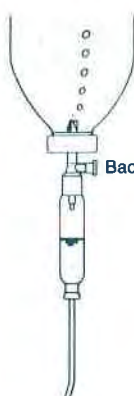
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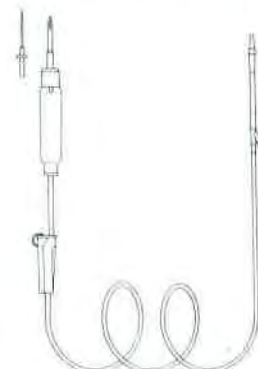
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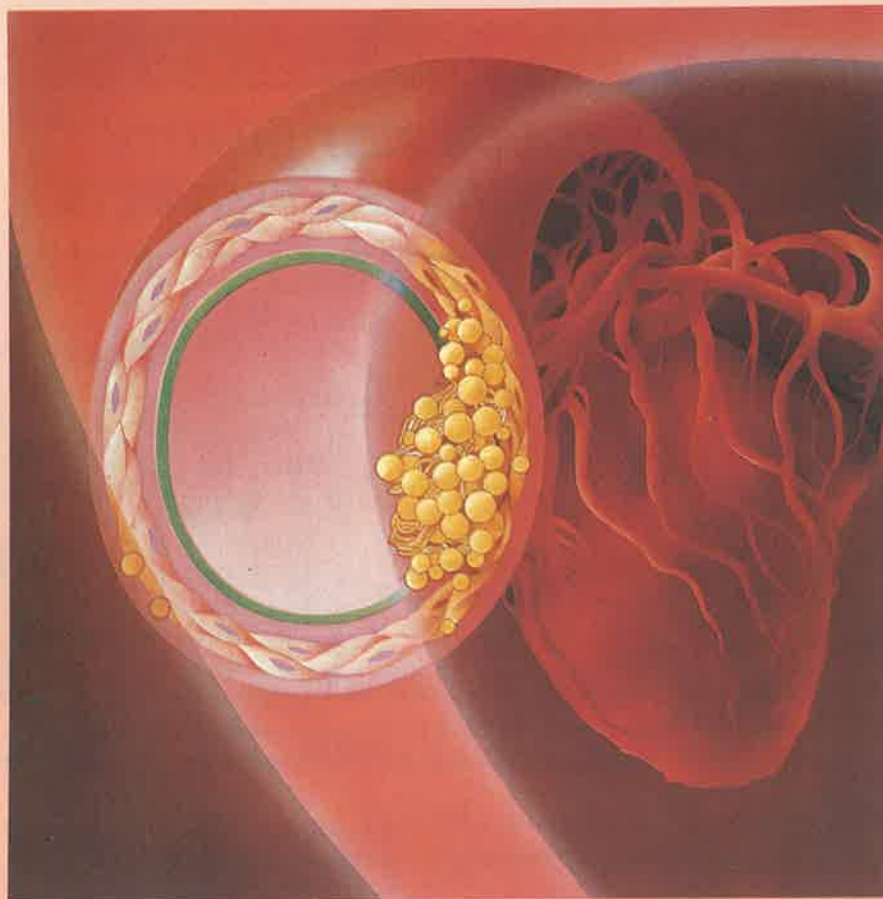
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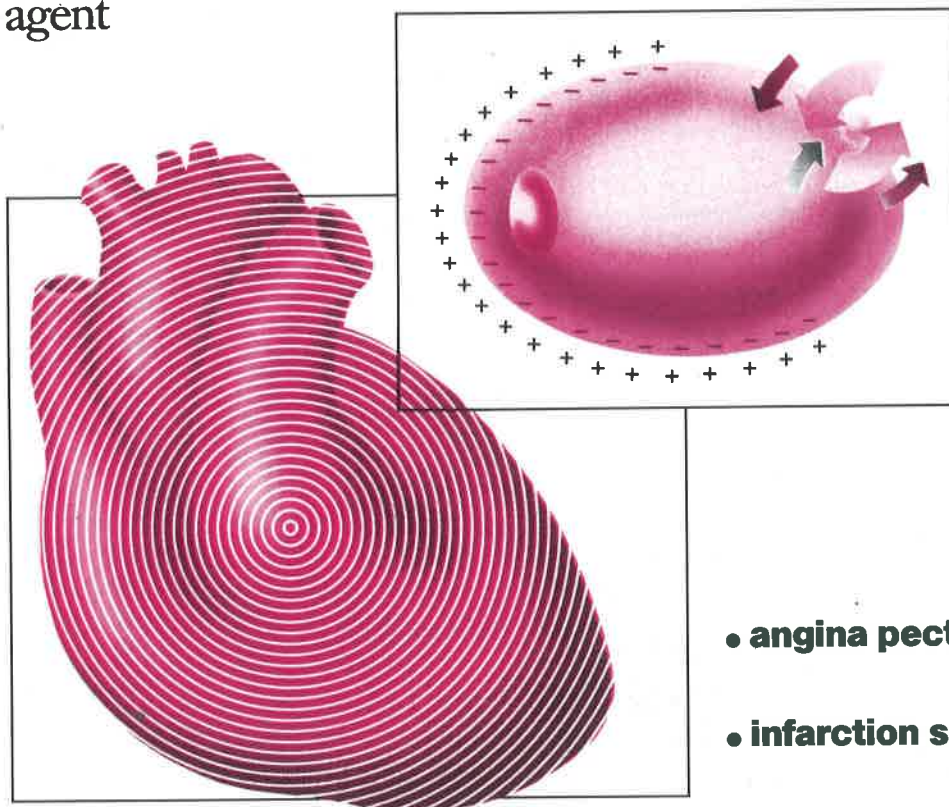
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MEDICAL RECORDS: RITES & RIGHTS

*"... to write an orderly account...
so that you may know the certainty
of the things you have been taught."*

Luke 1:3b, 4 (NIV)

The physician Luke who wrote the above verses and certainly true to his profession, was in no doubt that historical information had to be written in "an orderly account" so that the "certainty of the things" witnessed and taught might not be lost. He went on in 24 chapters to document an account that present day scholars regard as orderly, meaningful and chronologically accurate. In the verses quoted above are the essential elements of "MEDICAL RECORDS" involving information, the recording of information and the preservation of information.

Our MEDICAL RECORDS may never be studied by scholars. The law courts, however, may on occasions, demand their examination and scrutiny. If they conform to the Luke tradition of being orderly, meaningful and chronologically accurate our insurers in the Medical Defence Union or Medical Protection Society will be greatly comforted.

THE RITES

The rites of medical recording begin with history taking and may be divided into 3 phases. Phase 1 begins with the patient's presentation of his DIS-EASE. Phases 2 and 3 are but the doctor's necessary responses to his patient's presentation.

Phase 1. Patient's Presentation

This is the phase when the doctor LISTENS to "what the patient says" and OBSERVES closely "how it is said". Every

attempt must be made to record verbatim what is actually said and the emotive display accompanying what is said. This is the "face-value" history as presented by the patient. The relationship between patient and doctor develops from this initial phase.

The doctor should avoid putting words into the patient's mouth. The Asian habit of agreeing with the doctor despite the inability to understand medical jargon, the desire not to be thought of as being foolish, an unrealistically contracted consultation time and a brusque attitude are factors that have to be taken into consideration in history taking. The best history taken is one where the patient is allowed to use his own words to describe his own problem.

Every patient has his own special way of presenting his complaint i.e. with or without displaying feelings and emotion (in tears, in laughter, with expletives, with incongruity of complaint and feelings etc). The display of uninhibited feelings and emotion should not be discouraged. They should be noted with care and may be very important diagnostic pointers.

Phase 2. Doctor Response: Information Eliciting/Processing

In this phase the doctor through a series of questions (pre-planned and constantly refined) attempts to understand what has been presented to him as "face value" history by his patient. In other words an attempt is made to sieve the "face-value" presentation to sort out what matters and what does not matter. This is an intellectual SEPARATING PROCESS. This is not meant to be a rigid separation. What may appear insignificant may turn out to be significant and vice-versa may be not at the immediate time of "separating" but at a future date.

The process of separating precedes the process of GATHERING. In the gathering process a systematic effort is made to gather symptoms given by the patient into a constellation/s that provide clues that are significant and recognisable as clinical entities. These in turn may fit in with a functional disease or an organic disease or even both.

Phase 3. Doctor Response: Information Assessment/Evaluation

On the basis of the Patient's "face-value" presentation and the Doctor's "separating and gathering" processes, an evaluation and assessment of the patient's PROBLEM is made.

Is there a need for further "FILLING" in of information that is found to be incomplete or absent? Is another session with the patient required? Or is the information to be filled in by the patient's spouse, children etc with his/her consent? The patient's rejection to provide access to such information may by itself be significant and should be noted by the doctor.

The doctor is now in a position to FUL-FILL the requirements that are wanting to meet his patient's needs — a conceptual plan of action which may take the form of:-

- a) More information from the patient or from an independent source (family member etc) as and when he is ready to provide more such information and revelation;
- b) Clinical examination of the patient with particular reference to the system or organ indicated by the foregoing processes;
- c) Simple cost-effective laboratory tests that have become part and parcel of office equipment and expected to yield unequivocal results;
- d) More elaborate tests beyond his expertise that are indisputably useful;
- e) A working tentative diagnosis with room for revision or working up to the definitive diagnosis or diagnoses and
- f) A plan of care and treatment that is cost effective and where there is room for patient co-operation and education. A commitment of personal service with continuing medical and psychological

support for him and his family when needed is most reassuring.

THE RIGHTS

Just as the rites of medical recording begin with the patient's presentation of his DIS-EASE, the rights of medical records have their origins from the purpose of his visit. Why do patients seek doctors?

Information Seeking

I believe they seek doctors primarily for information:-

1. Information to resolve their own doubts.
2. Information to resolve the doubts of others.

Information to resolve own doubts

Diagnosis is the culmination of information seeking by the patient and the processes of eliciting and investigating by the doctor. Once made, whether tentatively or definitively, the patient's doubts are resolved and he is placed in a position of deciding whether to accept or reject the doctor's offer of treatment. The treatment offered may fall into 2 categories — the treatment of necessity and the treatment of choice.

Not everyone who seeks a doctor desires or requires treatment, taking the word in its widest meaning to include:-

1. Advice — preventive or supportive;
2. Medical, surgical or psychiatric care and intervention.

Sometimes the diagnosis itself resolves the patient's uncertainty and treatment is totally unnecessary. (E.g. the discovery that the xiphoid cartilage of the sternum has ossified and is palpable in the epigastrium as a lump).

Information to resolve the doubts of others

Present day living makes demands on patients to seek certification in respect of:-

1. Fitness or
2. Unfitness

for specific purposes demanded by law or in compliance with employment or life insurance requirements.

Certification is also sought to prove to the competent authorities that certain procedures such as immunisations and vaccinations have been done. Entry into certain countries may be denied if the visitor suspected of having AIDS cannot produce a medical certificate to the contrary.

Ownership Rights

The question of ownership may in part be resolved by considering the component parts of "Medical Records" and these are:-

1. Seeking Information
2. Recording Information or Recorded Information
3. Preserving Information (Media and Recording Devices)

Seeking Information

DIAGNOSIS which is a summary of information seeking by the patient rightly belongs to the patient. It is something he sought from the doctor and a fee has been accepted for that purpose.

CERTIFICATION which is attested information specifically sought and paid for is another area of patient ownership.

However DIAGNOSIS which culminates the elicitation, separation and gathering of information into recognisable clinical entities is also the intellectual property of the doctor based on his skills and experience.

INFORMATION is therefore the joint property of both the doctor and the patient. One without the other does not make sense.

Recording or Recorded Information

Recording is defined as the systematic entry of information in a manner that is permanent and retrievable. The manner of recording depends on the doctor. He records information best suited to his own needs and in his own special way. He owns the recorded information. It is his intellectual property.

Where doctors have to share in the care of patients as in group practices or institutions, they need to agree on or devise a common system of information recording so that they understand the entries made by one another. The common system of recording is the intellectual property of the group rather than the individual.

Preserving Information (Media & Recording Devices)

The media constitute the storage vehicles (they may be unstructured cards/files, elaborately prepared filing systems, floppy disks or hard disks etc) of information recording and the recording devices are the gadgets (manually, electronically and laser operated devices) enabling information to be deposited into the media. Both media and recording devices are normally prepared and perfected by the doctor in accordance with his needs. Their ownership is indisputably the doctor's.

Where the doctor is an employee or partner in an institution or group practice these media and recording devices are provided by the employing institution or group practice. Their ownership is obvious.

Rights of Employers

Employers may have contractual arrangements with independent doctors to enable their employees to submit to medical examinations for ascertaining or treating illnesses or to ensure fitness to remain in office or contingent upon their promotional emplacement. Despite these contractual arrangements, employers never really own any of the 3 components of "Medical Records" namely the information, the recorded information and the media and recording devices.

Fitness or unfitness certificates are obtained by the examinees from the certifying doctors to fulfill the obligations of the employee-employer contractual arrangements. The significance of these certificates must always be made known to the examinees. There is never the need to go behind the employee to divulge savoury or unsavoury aspects of the examination to the employer.

But what are the rights of employers who employ full time doctor-employees to look after the staff of their companies? They provide the clinics, the medical personnel and medical facilities in toto. Are they then the legal owners of all the components of "medical records"? Because they are not bound by medical ethics can they choose to use confidential medical information gathered in the patient-doctor relationship in a manner not entirely dictated by medical propriety? The apparent incongruity of rights in this situation may in part be understood in terms of which is supreme — that of the employee-employer relationship or that of the employee (patient) — doctor relationship. This is an open issue with no easy answers.

EPILOGUE

Whereas the RITES of medical recording may be found wanting and are seldom contested, the RIGHTS of access and ownership are not infrequently bones of contention. The complexities of present day medical practice increase rather than diminish the question of rights. Members of the medical profession may justifiably talk of their rights but they must not forget the rights of patients nor the rights of employers who carry the burden of financing health care of their employees. For a start they must fulfill conscientiously the necessary rites in medical recording. In the last resort of a broken patient-doctor relationship, our learned friends in the legal profession must be left to plead and argue and then to apportion to claimants their respective fragments of rights in the usual rites governing the process of justice in the law courts.

LVC

HEALTH FOR ALL BY YEAR 2000 — A SINGAPOREAN'S PERSPECTIVE

Dr Lee Hin Peng, MBBS (S'pore), MSc (PH) (S'pore),
MFCM (UK)

PREAMBLE

It is with a deep sense of gratitude and humility that I stand before you today. By inviting me to give this oration, you have certainly done the Department that I represent great honour — and I thank you.

It was not my privilege to have known the late Dr Baratham Ramaswamy Sreenivasan, Founder-President of the College and the first local Vice-Chancellor of the then University of Singapore (1962-1964). The respect that he commanded was clearly evident as I went through some of the early writings and published speeches in the local medical literature. It is an apt reminder to those of us younger in the profession and in life, that what matters and lives after we are long gone is not our cleverness, nor even our skills, but our integrity and standing as respected members of society.

The College is certainly very fortunate to have had such noble and far-sighted leaders, including those who followed in Dr Sreenivasan's footsteps. Having worked closely with the Council since 1986, starting with the joint memorandum, I am impressed by the social consciousness and selfless dedication of your members. In seeking to promote continuing medical education, thereby upgrading the practice of primary medical care, you are making a significant contribution to effective health care delivery in Singapore.

*Associate Professor and Head
Department of Community, Occupational and
Family Medicine
National University of Singapore*

INTRODUCTION

As one whose main interest is in epidemiology and community medicine, it would not be in order for me to comment on the clinical aspects of family practice as in many previous orations. Instead, I would be better advised to keep to my turf and hopefully, avoid exposing my ignorance. Health and health care are crucial issues at the interface between family and community medicine. They should therefore be of some relevance to you as well.

The context for our discussion is the much-publicised WHO-sponsored endeavour called 'Health for All by the Year 2000' (HFA). As a man of great vision, Dr Sreenivasan would have been excited by this social movement which was launched in 1978. Ten years have passed and we have twelve to go before 2000. Are we any nearer the goals? I venture to present to you a Singaporean's perspective. In doing so, let me emphasise that it is a personal viewpoint, as I have no mandate to represent the Ministry of Health, nor the University.

WHAT IS 'HEALTH FOR ALL'?

The slogan is very simply worded, almost naive, but the thrust of concern is revolutionary. I can think of no other worldwide movement in recent history that has had so much impact. After all, what is human existence all about, except to acquire the means to live in health, harmony and happiness?

I am reminded of the World Health Assembly which I attended in 1984. A politician, quite inadvertently, referred to HFA as "health for all in 2000 years..." The slip is almost prophetic, because some peo-

ple genuinely believe that it is almost impossible to achieve HFA by the year 2000.

'Health for All' is a rallying call to the international community to enable "*the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life*". It is a battlecry to give renewed impetus to the whole process of social and economic development, of which health is a vital component. It is not a single, finite target. Rather, it is a developmental process leading to progressive improvement in the health of our people.

Implicit in the strategy of HFA is the realisation that health is only a part of socio-economic well-being. Good health is an important ingredient for higher productivity and development. A buoyant economy will support a high standard of health care; in turn a healthy population will contribute substantially to economic growth. Thus, it is in the interest of all countries to invest in people — their health and education. In Singapore, this is vital.

It is important that we get the concepts right. 'HFA' does not mean that:

- a) the best health care will be made available for all people to take care of all diseases;
- b) nobody will be sick or disabled by the year 2000.

It does mean the following:

- a) Essential health care will be made available to all individuals and families in an acceptable and affordable way.
- b) There will be more equitable and need-based allocation of finite health resources.

We are all well aware of the three universal concerns in the delivery of health care viz:

- 1) increasing and seemingly limitless cost of health care;
- 2) over-dominance of hospital care and the use of high-technology support;
- 3) finiteness of available resources.

The fundamental principles governing the 'HFA' movement include the following:

- 1) Health is a basic human right.
- 2) Health resources should be more equitably distributed, between and within countries.
- 3) People must be involved in the planning and implementation of their health care system.
- 4) There must be political commitment on the part of the government to the movement.
- 5) Countries must take the initiative to solve their own problems, although they may need international assistance.
- 6) Health development is an intersectoral activity that requires the co-operation of many disciplines and experts.

THE PRIMARY HEALTH CARE APPROACH

A well organised health care system would invariably encompass the following:

- 1) coverage of the total population,
- 2) provision of comprehensive, essential care,
- 3) integration of preventive and curative services,
- 4) co-ordination of primary, secondary and tertiary services,
- 5) mechanisms for quality control of services,
- 6) adequate funding and equitable distribution of resources for all relevant services.

Right from the very beginning, the leaders of the movement recognized that Primary Health Care would be the cornerstone of 'HFA'. It was and still is the only rational, cost-effective strategy to achieve basic health for the majority of our people.

Primary Health Care (PHC) is not primitive health care. Neither is it opposed to high technology or excellence. It is the first level of contact in the national health service and incorporates promotional, preventive, curative and rehabilitative func-

tions. As such, excellence in PHC will go a very long way in maintaining and promoting the health of our people.

The PHC movement, as exemplified by the Alma-Ata Declaration, came about because in many developing countries, people in rural and poor areas were deprived of essential health care. In such situations, there was an urgent need to re-orientate political and administrative thinking, so as to achieve a more equitable distribution of health resources. We had to agree on the essentials and ensure that they were made available to the people who were in need of such care. Relevant technology had to be developed and wisely applied.

WHERE DOES SINGAPORE STAND?

There is no denying that we have gone beyond the minimal targets of 'HFA'. This is seen when we compare some of the health indicators against the global targets suggested by WHO:

Indicator	Global Target	Singapore
a) GNP (per capita)	US\$500	US\$7500 (1987)
b) Infant mortality rate (per 1000)	50	9.4 (1986)
c) Expectation of Life at Birth	60 yrs	M : 70.3 (1985) F: 75.7
d) Dr: Pop. ratio	—	1 : 889 (1987)
e) Beds per 1000 pop.	—	3.9 (1987)

Health services at all levels are readily available. Aided by our smallness and good infrastructure, no person in Singapore is more than a few kilometres away from a primary health care clinic, estimated to be about 750 in the whole island. He is also less than a hour's drive away from a general hospital. Economically and socially, these services are accessible to all, whether they be in the private or public sectors.

Although we have achieved a commendable level of health together with an enviable health service, let us not be deluded into thinking that PHC is no more relevant. We have the new challenges of the increasing expectations of a health-conscious people, increasingly sophisticated and cost-

ly technology and the growing health needs of an aging population. Even wealthy nations like the USA have realised the importance of maintaining a highly effective PHC system to cater to the bulk of health needs in society.

High-technology hospital-based health care are vital to handle the end stages of the disease spectrum. But these expensive facilities should not be used to tackle common health problems which can be more effectively managed at PHC centres, public or private. How then should we go about organising a truly effective PHC system? From the medical perspective, I suggest that we need four vital ingredients, and they are:

- 1) a clinically-competent profession,
- 2) a caring profession,
- 3) a cost-conscious profession, and
- 4) a more organised profession

A CLINICALLY-COMPETENT PROFESSION

Undoubtedly, patients who are sick deserve the best possible care and cure available. We need well trained doctors in PHC and in specialist care. Certainly, PHC doctors can be more effective, to do much more than they are doing now.

The Medical School's main objective is to produce primary care doctors and those who can undergo further training in specialisation. This overriding concern is not just for one department, but for the whole faculty. Clinical training, if it is to be more relevant to the objectives, will have to include more exposure in the primary care setting. The range of medical topics taught and the strategies for management should also reflect the epidemiology of community-based practice.

A CARING PROFESSION

We cannot emphasise this enough, that we need health personnel who care. Technological advancement has given us machines which can do much of the technical aspects of our work. In fact, they are sometimes better: they are less prone to human error, they don't get bored and tired and they don't shout back. But they

are at best still machines. A human being in pain and suffering needs another human being for comfort and sympathy. Much of doctoring is still an art.

In PHC, the human element is crucial. Patients and their families must feel comfortable in relating to their primary care doctor — the first person to be called in case of need. They must have the confidence that he will provide good and sound advice, which may include referral to a specialist. The primary care doctor is not a glorified postman — he is a true health manager who has the interest of the patient and his family at heart.

A COST-CONSCIOUS PROFESSION

When a person is sick, either he or his relatives will want the best possible attention for him. Cost considerations do not feature very prominently because conscience dictates that we must do all we can to save a life. Spending the inevitable is one thing, but whether we get value for our money is another. To pay more for what can be done less expensively is wastage that we can ill afford. It is even worse when money is used to give the appearance of effect.

The Medisave scheme has enabled our people to have the means to pay for hospitalisation costs. That is only one side of the equation. To provide the means without proper checks and controls is to fuel runaway expenditures, thereby escalating costs from the national perspective. This would in turn backfire and cause even greater hardship for the people in the long run.

The non-applicability of the free market model in health care is best exemplified by medical licensure. Medically trained personnel must be subject to licensing control to maintain standards, including ethical standards, of practice. Precious lives are at stake and it is imperative that we do not just allow a free play of market forces in this regard.

It is not my task in this lecture to discuss the weighty issues of health care financing. My main thesis is that health care can be made more cost-conscious and cost-effective by proper planning, co-ordination and control at the national level.

A MORE ORGANIZED PROFESSION

To avoid undue wastage and duplication, there must be greater co-operation among health care providers. They can be usefully organised on a regional basis incorporating both public and private sectors under a single co-ordinating body (e.g. Community Health Council), very much like our Town Councils. This dichotomy between the public and private sectors is increasingly being blurred. Similarly, the relationship between primary care doctors and specialists should be one of mutual respect and support, not bigotted rivalry.

Every person should have a primary care doctor who serves as the gateway and guide to the whole health care system. The patient as consumer does not have adequate knowledge to exercise his sovereignty in the first place. This is especially so when symptoms are vague or when patients have multiple pathologies requiring the attention of different specialists.

A family practitioner is one who "assumes primary responsibility for both the acute medical care and the continuing health maintenance of the family" (LB Carmichael, 1973). Treating an illness is not just an episodic event. There must be continuing responsibility in maintaining health. The public would be well advised to develop a good long-standing rapport with a chosen family doctor, and not doctor-hop. And the doctor on his part must provide professional, competent service at reasonable rates.

The advantages of a regionalised health care system include the following:

- 1) more effective coverage of all people;
- 2) sharing of expensive support facilities (e.g. laboratories, x-ray machines) according to economies of scale;
- 3) arrangement of night cover for registered patients round the clock (on a rotational basis);
- 4) having a critical mass for a viable CME programme in mutual learning and teaching;
- 5) establishment of a network of supporting institutions e.g. hospitals, home nursing, pharmacies, etc. in providing total care.

It is in the direct interest of everyone that primary care doctors and specialists play a complementary role. A specialist who is overloaded with patients having everyday illnesses will have difficulty tackling the truly complicated conditions. His skills as a specialist need honing. He needs the time and energy which complex problems demand.

This pyramidal structure of health service is not an attempt to deny free access to health care. Instead, it is a rational approach to ensure that relevant care is given to patients according to the type and level of need. In this way, we get what we need and thus avoid having to spend more than is necessary. Furthermore, we will be assured of proper specialist care as and when the situation demands.

CONCLUSION

We all want better health care. It should be cost-effective and affordable. There should be good doctor-patient rapport for continuing care and health maintenance. Such objectives cannot but bring health professionals together to work for the common good. To let each sector — government, university and private — proceed freely in an open market will result in duplication and wastage. If health care is to be properly developed and equitably distributed, there must be reasonable and effective control and co-ordination. Only then can we hope to achieve HFA by 2000 at a level that will satisfy the rising expectations of a population reaching out for excellence.

ORIGINAL ARTICLES

ENDOSCOPIC MANAGEMENT OF UPPER GASTROINTESTINAL BLEEDING

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SUMMARY

Rapid advances in fiberoptic endoscopes have greatly aided doctors in the management of GIT problems. Whereas in the 1970s, development in endoscopy largely concern refinements in diagnostic method, the 1980s saw the development of new therapeutic endoscopic technique. Some of these have become an integral part of standard endoscopic practice while others are currently being evaluated.

Upper GI bleeding continues to be a world-wide problem to clinicians and fiberoptic endoscopy has facilitated the identification of bleeding sites. As for the therapeutic role, a variety of endoscopic haemostatic methods have been proposed. This report discuss recent experiences with some of the techniques available locally.

INTRODUCTION

Acute upper GI bleeding continues to be a common source of emergency admissions worldwide. This condition, to-day still carries significant mortality rate of 2-15%.¹⁻³

Traditionally, the management of this condition, consists of resuscitation, diagnosis by barium studies and if the

patient re-bleeds a laparotomy often without a firm diagnosis being made pre-operatively. Early papers have largely condemned this method owing to the high mortality rate especially in elderly patients.

With the rapid development of fiberoptic endoscopy, the more specialised units have developed an emergency endoscopy service where patients are scoped 12 hours from time of admission. In this way, in up to 90% of the cases the source of acute bleed can be identified.⁴

In this way, an early and accurate diagnosis provides an avenue for optimal management of each individual patient. Also it allows the clinician to select patients who would benefit from early surgery from those whose condition would follow a benign course with conservative medical management alone.

THERAPEUTIC ENDOSCOPY

A major therapeutic contribution of endoscopic diagnosis in GI bleeding has been the introduction of the concept of stigmata of recent haemorrhage (SRH).⁵ It has been shown that patients with such SRH are at risk of continued/recurrent rebleeding.

Signs of SRH include:

- 1) Presence of a visible vessel in ulcer.
- 2) Spurting/oozing at time of endoscopy.
- 3) Presence of a clot within a peptic ulcer.

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By the early 1980s, a variety of modalities for endoscopic haemostasis had been developed. It was hoped that using these new devices would lead to a reduction in mortality rate, an avoidance of surgery, a reduction in the need of blood transfusion and an overall reduction in the period of hospitalisation in patients with bleeding GI. No single method is ideal for all situations and each patient's treatment has to be individualised.

TABLE 1: ENDOSCOPIC THERAPY OF GIT BLEEDING

(A) Topical	1 tissue glues 2 collagen 3 clotting factors
(B) Injection	1 variceal 2 injection of bleeding peptic ulcer — adrenaline, absolute alcohol
(C) Mechanical	1 surgical clips 2 sutures 3 balloons
(D) Thermal	1 laser 2 heater probe (HPU) monopolar diathermy bipolar diathermy (BICAP probe) 3 Cryotherapy

Of these, those of (B) and (D) here received the greatest attention in the late 1980s with a high success rate in haemostasis in most series.

INDICATIONS AND CONTRAINDICATIONS

Elderly patients with concurrent illness like recent Myocardial Infarct, Cerebrovascular Accident, Chronic Obstructive Airway Disease are candidates for therapeutic endoscopy especially when the scope reveals SRH. When the patient is of poor operative risk, therapeutic endoscopy can be used: 1) as a temporary measure so that semi-elective surgery can be performed later or 2) as definitive management of the bleeding peptic ulcer.

The main contraindications are:

1. Anatomical inaccessibility
2. Diffuse mucosal ooze from the entire stomach mucosa
- 3) Torrential bleeding so fast that a clear view via the scope cannot be maintained

DISCUSSION

The commonly used methods in the National University Hospital are:

- 1) Heater probe
- 2) Laser photocoagulation with Nd-Yag laser
- 3) Injection of sclerosants

The heater probe uses both thermal energy and pressure tamponade of a bleeding point in order to promote coagulation and sealing of a bleeding vessel. A local paper from the NUH concluded that by the sole use of the heater probe 83% of peptic ulcer bleeding can be controlled but up to 33% would re-bleed.⁸ Hence, the heater probe is satisfactory for the initial haemostasis but not to prevent ulcer re-bleed.

The neodymium-yttrium aluminium garnet (Nd-Yag) laser has been found to be useful in the management of gastrointestinal bleeding due to its coagulation properties and its unique ability to deliver laser energy through a flexible scope. An advantage of laser photo energy is its ease of application and its controlled depth of penetration.

A wide variety of trials⁷⁻⁹ have revealed that it is successful in reducing the duration and recurrence rate of bleeding from peptic ulcers as well as the need for emergency surgery.

Endoscopic injection of sclerosants were first developed by the Japanese.¹⁰ Both alcohol and adrenaline have been used. In the studies using alcohol injection, the mechanism of haemostasis is explained by the dehydration of surrounding tissue with resultant shrinkage of vessel and its subsequent thrombosis. Bleeding from an artery as large as 3 mm can be controlled in this way. In recent series,¹¹ the initial haemostasis could be achieved a 99% with a rebleed of 10%. However of great significance is that in those with pulsatile arterial bleeding there was a 75% rate of permanent haemostasis. The mechanism of haemostasis in adrenaline injection is two-fold. 1) Volume effect, 2) Pharmacological effect — vasoconstriction of blood vessels.

CONCLUSIONS

Therapeutic endoscopy has greatly influenced treatment in gastrointestinal bleeding in the 1980's. At present a multimodality approach towards actively bleeding lesions is being evaluated by our surgical endoscopic service and within the next few years a better appreciation of the effectiveness of such an approach will be obtained.

REFERENCES

1. Wong J, Lam SK, Lee NW, Lai Cl, Lam P, Ong GB (1980): Immediate operation for acute non-variceal gastrointestinal haemorrhage in patients over 50 years. *Australian and New Zealand Journal of Surgery* 50: 150-154.
2. Kang JY, Dipert DW (1980): Improvement in mortality rates in bleeding peptic ulcer. *Medical Journal of Australia* 1: 213-215.
3. Hunt PS, Francis JK, Hansky J, Hillman H, Korman MG (1983): Reduction in mortality from upper gastrointestinal haemorrhage. *Medical Journal of Australia* 2: 552-555.
4. Bown SG, Salmon PP, Brown P, Reed AE (1981): Upper gastrointestinal haemorrhage. *Journal of the Royal College of Physicians of London* 15: 265.
5. Foster DN, Miolszewski KJA, Losowsky MS (1978): Stigmata of recent haemorrhage in diagnosis and prognosis of upper gastrointestinal bleeding. *Br Med J* 1: 1173.
6. P Goh, SS Ngoi, R Guan, A Rauff: When not to use the heater probe in the treatment of upper GIT bleeding. Submitted for publication in the GUT.
7. Rutgeerts P, Vantapper G, Broechar L (1982): Controlled trial of YAG laser treatment of upper digestive haemorrhage. *Gastroenterology* 83: 410.
8. Swain CP, Bown SG, Salmon PR et al (1983): Controlled trial of Nd: YAG laser photocoagulation in bleeding peptic ulcers *Gastroenterology* 84: 1327.
9. Vallon Ag, Cotton PB, Laurence BM et al (1981): Randomised trial of endoscope laser photocoagulation in bleeding peptic ulcer. *Gut* 22: 228.
10. Sugawa C, Ikeda T, Fujita Y et al (1984): Endoscopic haemostasis of gastrointestinal haemorrhage by local injection of 98% ethanel: An experimental study. *Gastrointest Endosc* 30: 155.

CASE REPORT OF A PATIENT WITH ACUTE CONFUSIONAL STATE

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INTRODUCTION

With polypharmacy and the use of drugs with several active metabolites, the potential for drug interactions and side-effects are considerable. A drug — drug interaction occurs when one pharmacological agent influences the action or side-effects of another drug, either qualitatively or quantitatively.¹

The clinical presentations vary from mild physiological changes to psychiatric manifestations of organic changes. Often the etiology may be missed unless the drug history, whether long-term or recent use, is properly elicited.

We report a case of a patient who presented in an Acute Confusional State after he took prochloperazine (Stemetil) tablets while abusing Bronchodil which was prescribed for his asthma.

CASE REPORT

CPC, a 45 year old farmer was referred by his family physician with a history of abnormal behaviour of acute onset. A known asthmatic for 10 years, he was treated with Bronchodil for 4 years. In the last 6 months because of frequent asthmatic attacks, he had taken 3 to 4 tablets, 7 to 8 times a day. Suddenly one morning he experienced "giddiness, heaviness of head" and felt confused; he saw his doctor who

prescribed prochloperazine and paracetamol. The next day he had difficulty recalling the previous day's events. He spent the day mainly resting in bed and continued taking Bronchodil and Stemetil tablets. That night he was unable to sleep and demanded sexual intercourse repeatedly, attacking his wife when she refused him. He finally fell asleep for 4 hours but was disturbed and restless when he awoke. He pushed household items out of his way, walked about naked and sang loudly. His family called the police for help.

There is no family history of mental illness. CPC had secondary education and worked in farm jobs till 5 years ago when he inherited his father's farm and began to work in it full-time. He is married with 3 teenaged children and there are no marital or financial problems. Apart from the asthma there were no other past medical or psychiatric problems. He smokes occasionally but has no history of illicit drug abuse or a forensic record. He was described as a hardworking, homely person and a good father.

When seen in the Admission Room, Woodbridge Hospital, CPC was cheerful, talkative and unconcerned about his present predicament. He was only able to recall that he had thrown things and stripped himself and was able to say how many Bronchodil tablets he took although he did not realise the seriousness of its excessive use. There were no hallucinations or delusions but his concentration was poor and he was not orientated to day or date. There were no deficits on simple memory tests. The only significant finding on physical examination was a tachycardia.

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In the ward he was taken off stemetil and the dose of Bronchodil was reduced. When reviewed the next morning, CPC was alert; he felt very well and demanded a discharge. He described the previous 3 days' events as 'like a dream'. He had little memory of what he had done. He was able to give his personal particulars and was orientated to time, place and person.

A diagnosis of acute confusional state as a result of drug interaction was made. CPC was advised on the risks and consequence of taking Brochodil excessively. He was also advised to inform the doctors he consulted about the medication he was on.

When reviewed 2 weeks later, CPC was well. He had no further episodes of confusion and was working on his farm again. He had reduced the intake of Bronchodil tablets.

Discussion

Acute confusional states are also termed delirium or acute organic brain syndromes. This case meets the criteria listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM Third Edition 1980).² See Figure 1. The readily available drug history was helpful in eliciting the underlying etiology of his illness.

Each Bronchodil tablet includes Theophylline 120 mg, Ephedrine 15 mg and Phenobarbitone 8 mg. Theophylline, a methylated xanthine, is a cerebral stimulant with action on the medullary respiratory centre, circulatory system and smooth muscles of the bronchi.⁴ Side-effects include tachycardia (noted in this patient), nausea, vomiting, headache, dizziness, agitation, insomnia, confusion and toxic psychosis. It was unfortunate that the serum theophylline levels were not assayed in this patient.

Ephedrine, also a cerebral stimulant produces alertness, anxiety, tremor, insomnia and nausea. Phenobarbitone however, is a cerebral depressant and in daily dose is cumulative in its effects as it is not rapidly metabolised.⁴

Theophylline toxicity can lead to giddiness as well as a confusional state. Pro-

chlorperazine by itself can also cause mental confusion especially in the elderly. When taken together there is no well documented drug interaction; there may be an increase or decrease in the levels of either drug.

It is most likely that the confusional state in this patient was a summation of the side-effects of, excessive use of Bronchodil and prochlorperazine.⁵

CONCLUSION

Abnormal mental symptoms of acute onset should alert one to an underlying organic cause; a drug etiology has to be ruled out in all patients who present with acute confusional states.⁶

All long term medication needs to be reviewed. The physician in prescribing, has to be aware not only of what medication the patient is currently on, but also of the possibility of drug interactions. Most important of all is patient education on the use of drugs and on the consequences of their misuse and abuse.

Figure 1: DSM III Criteria for Organic Syndromes: Delirium

- A. Clouding of consciousness, with reduced capacity to shift, focus, and sustain attention to environmental stimuli.
- B. At least 2 of the following:
 - (1) perceptual disturbance: misinterpretations, illusions or hallucinations.
 - (2) speech that is at times incoherent.
 - (3) disturbance of sleep — wakefulness cycle.
 - (4) increased or decreased psychomotor activity.
- C. Disorientation and memory impairment (if testable).
- D. Clinical features that develop over a short period of time (usually hours to days) and tend to fluctuate over the course of a day.
- E. Evidence, from history, physical examination, or laboratory tests, of a specific organic factor judged to be etiologically related to the disturbance.

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REFERENCES

1. Harold Kaplan and B Sadock: Modern Synopsis of Comprehensive Textbook of Psychiatry IV. Fourth Edition. Baltimore: Williams & Wilkins. 672-675.
2. American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders. Third Edition, 1980.
3. Roberts JKA Delirium. In: Differential Diagnosis in Neuropsychiatry, New York: John Wiley; 158-1968
4. Ellinwood EH and Rockwell WJK. CNS Stimulants Anorectic agents. In: Side-Effects of Drugs. ed Meyler L, 10th ed. Elsevier, 1984.
5. Side-Effects of Drugs No 7 Edited by L Meyler and A Jerxheimer. Published by Excerpta Medica.
6. Lishman WA. Toxic Disorders In: Organic Psychiatry. Blackwell, 699-745.

FALLS IN THE ELDERLY

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A fall is an untoward event in which the person unintentionally comes to rest on the floor. Falls are common in old age; it occurs in 20% of elderly men and 40% of women living at home.

Falls and instability represent one of the four giants of geriatric medicine viz. intellectual dysfunction, instability, immobility and incontinence. It also exemplifies one of the final common pathways of geriatric presentation; multiple diseases and organ failures in the old person may finally manifest as a falling event. Falls in the elderly are puzzling to both the patient and the physician. Most old people who fall cannot recall the circumstances of the fall and the physician faced with this problem is also at a loss to investigate further. Management is often directed at the morbid events from the fall such as fractures and bodily injuries but the basic evaluation for the causes of the fall is neglected at most times. As adequate medical input is missed at each stage of deterioration, the initial instability will eventually give way to the more morbid problem of immobility. Every single fall in the old person needs complete evaluation but before this can be done, the balance mechanism in the elderly must be analysed.

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BALANCE MECHANISM IN OLD AGE

Under normal circumstances during standing, the vertical line through the centre of the body mass must fall within the support base. During walking or getting up from the chair, the line of gravity moves beyond the edge of the support base and these minor displacements are detected by sensors in the eyes, vestibular system and special proprioceptors in the neck and feet. Nervous impulses are transmitted to the spinal cord by fast spinal stretch reflexes and also to the cortical brain centres via long reflex loops. The resulting impulses transmitted to the muscles of the neck, trunk and limbs enable the old person to restore the line of gravity within the support base again. This servomechanism to maintain balance comprises three components: the afferent mechanism which detects body displacements, the central processing unit at the spinal and cerebral levels and efferent system at the musculoskeletal level. Aging affects the efficiency of the servomechanism at multiple sites and thus imbalance in the elderly is often a multifactorial problem.

Balance can be assessed by studying the sway, sweep and stagger mechanisms which ensure that the line of gravity falls within the support base. During normal standing balance, with eyes open and feet slightly apart, the anteroposterior sway is just visible, and there are no sweeping or staggering movements. Application of gentle pressure to the sternum or putting both feet together increases the anteroposterior sway in normal person. This sway can be objectively measured by the Wright Ataxiometer which is a simple machine resembling the usual weighing machine. Postural sway in the A-P plane

when standing increases with age. Old people with proprioceptive loss in both lower limbs have increased sway when they close their eyes in the standing position. These old people have a tendency to fall at night when their vision fails to compensate for the proprioceptive loss. On the other hand, when there is conflict of information between the visual and proprioceptive systems due to poor eyesight, closing of eyes eliminate the source of confusion and the amount of sway decreases. Apart from alteration in sway, both sweeping and staggering movements occur when the amount of imbalance increases. Sweeping movements of the trunk and upper limbs enable the old person to shift the position of his centre of mass so that the vertical line of gravity falls within the support base. Staggering movements involve the shifting of the lower limbs to alter the position of the support base. The old person with repeated falls exhibits frequent staggering and sweeping movements during walking.

CLASSIFICATION OF FALLS

It may be difficult to classify falls based on etiology as the underlying balance mechanism is complex and also multiple factors may contribute to the fall. However, on a practical basis, falls may be classified into two main categories:

- (I) Falls due to tripping and accidents
- (II) Falls not due to external hazards. i.e. the non-tripper

Trips and accidents, as the name implies, are due to factors in the external environment while in non-trip falls, the 'internal component' or changes within the body system are more important. However, both external and internal factors may occur together in the elderly; these internal factors such as poor coordination skills and central processing, predispose some old people to trip more often than others in the face of an external hazard.

(I) TRIPS AND ACCIDENTS

These account for 45% of all falls in the elderly. But this type of fall declines with increasing age as older people with more restricted activities have less tendency to

be exposed to external hazards. Those who trip are more posturally stable and their postural sway on standing is significantly less than others who fall because of non-trip events. Trips and accidental falls are of no prognostic significance if they occur occasionally provided the faller does not suffer any major injury and is able to get up immediately after the fall. The balance mechanism is normal in structure and function if there are no other internal factors that predispose to the fall. The mortality of trippers is therefore less compared to falls from other causes. Many elderly people are often puzzled after a fall and when asked what had happened, often replied that 'I must have tripped'. Patients who express themselves in this way need to be investigated further for other causes of falls. Old people having fallen to the ground without obvious cause often attribute the fall due to external hazards as they are ignorant of other factors that could have contributed to the fall.

(II) FALLS NOT DUE TO EXTERNAL HAZARDS

As the term implies, non-trip fallers have a balance system which is impaired either structurally or functionally. Those who fall whilst standing require less force or displacements compared to others who fall whilst getting up from the chair or during active walking.

Non-trip falls can be classified into two types:

- (a) **INTERMITTENT FALLS** and (b) **PERSISTENT FALLS**.

- (a) **INTERMITTENT FALLS** occur when the balance mechanism is functionally impaired intermittently and in between falls, the balance is normal both structurally and functionally. The fall occurs while standing or walking and comes on suddenly often without any apparent reason. Because of the sudden onset, the etiology lies in decreased blood flow to the brain stem or spinal cord in the watershed area causing interruption of nervous traffic between the peripheral sensors, central processing units and the effectors. The patient may complain of sudden weakness of both legs followed by tran-

sient paraparesis due to temporary spinal ischemia. Cardiac arrhythmias, postural hypotension and drop attacks related to vertebrobasilar insufficiency are possible causes for the transient circulatory defects.

- (i) **Cardiac syncope:** Falls associated with loss of consciousness should raise the suspicion of cardiac syncope. This may be preceded by palpitation, dizziness, chest pain or breathlessness. Cardiac syncope may be due to silent myocardial infarction, pulmonary embolism, cardiac arrhythmias, aortic stenosis or carotid sinus sensitivity. The presence of abnormal rhythm changes in the patient who has fallen, does not prove any causal relationship unless continuous ECG monitoring shows the simultaneous occurrence of both events. However, the yield of ECG monitoring has been found to be variable; transient arrhythmias are shown as a potential cause of syncope in the elderly in 10 to 64% of patients studied.
- (ii) **Postural hypotension** occurs in about 20% of old people over 65 years but many are often asymptomatic. Orthostatic hypotension accounts for 3-6% of falls in elderly. Getting up from the sitting position predisposes the old frail elderly to falls as the line of gravity easily shifts out of the support base. A change of posture may not be associated with change of blood pressure and yet results in a fall. On the other hand, a change of posture associated with postural hypotension may also not result in a fall. Therefore falls during change of posture may or may not always be attributed to the drop in blood pressure.
- (iii) **Drop Attacks** account for 10-20% of all falls in the elderly. In Sheldon's original description of the drop attack, the old person unexpectedly falls to the ground while standing or walking and this often follows head or neck turning. There is no loss of consciousness but there is loss of strength and muscle tone in the legs resulting in difficulty in standing up. This may last for

several hours; finally, pressure on soles of feet will restore the muscle tone and the old person gets up to walk again without any neurological sequelae. Drop attacks are due to transient vertebrobasilar insufficiency from extra-vascular cervical spondylosis or intra-vascular atherosclerosis resulting in disturbance in function of the brain stem reticular formation. Pressure on the soles of the feet evoke spinal reflexes which restore the muscle tone finally. The drop attack is suggested from the classical history and also other features of vertebrobasilar insufficiency. But occasionally the drop attack may appear as the sole manifestation of brain stem ischemia.

(B) PERSISTENT FALLS

The old person who falls repeatedly after minor displacements, have abnormal balance mechanism both structurally and functionally in between falls. The persistent faller can be classified as either a fast reactor or slow reactor. Fast reactors respond rapidly but inaccurately to displacements because of faulty information from the peripheral sensors. Slow reactors respond accurately to displacement but nevertheless fall because of delayed central processing. The latter often score poorly on mental function tests and are less treatable than the fast reactors.

Persistent falls may be due to single or multiple pathology in the balance mechanism:

Peripheral sensors	vision — cataract, masclar degeneration, refractive error, glaucoma, diabetic retinopathy vestibular — peripheral vestibular lesion e.g. Meniere's Proprioceptive defects — Cervical spondylosis/ arthritis peripheral neuropathy
Central Processing	Stroke, depression, dementia, Parkinson's disease, acute confusional states, acute illnesses and drugs such as hypnotics, tranquillisers and alcohol

Peripheral effectors myopathy, osteomalacia, arthritis, old fractures and stable neurological defects.

Cervical spondylosis associated with degeneration of the cervical articular mechanoreceptors may lead to postural and gait instability as these mechanoreceptors can contribute to static postural sensation (sense of balance) and cervical kinesthesia (awareness of head and neck movements). Falls on head turning account for 4-5% of all falls in the elderly.

CLINICAL EVALUATION OF FALLS

In the initial evaluation of falls, the following points need to be noted:-

- (a) Is the fall due to external hazards? Even when obvious external hazards are present, are there 'internal' changes of the balance system that predispose the old person to fall?
- (b) If the fall is not due to an external accident, is the balance mechanism intermittently or persistently impaired in between falls?
- (c) For intermittent falls, is there evidence of abnormal cardiac rhythm or postural hypotension?

For persistent falls, does the defect lie in the sensors, the central processing or the effectors?

- (d) Are there possible reversible factors which are responsible for the fall?

Apart from the usual history and physical examination, a problem-orientated approach to gait analysis must be performed. This can be done in the clinic setting by simply observing how the old person gets up from the chair, stands up and walks a short distance.

PROBLEM ORIENTATED APPROACH TO MOBILITY

(1) Getting up from the chair

This may be difficult for the old person with myopathy, osteomalacia, arthritis or underlying neurological defect such as hemiparesis and deconditioning due to long-standing immobility.

(2) Standing balance with eyes open

In normal subjects standing with feet slightly apart and eyes open, there is slight acceptable anteroposterior sway. This sway is increased in those with some underlying abnormality of the balance system.

The Backward Leaning Syndrome occurs in some elderly patients with Parkinson's disease, cerebrovascular stroke or senile dementia, possibly due to involvement of the basal ganglia. It is also sometimes seen in neurologically stable patients who have been confined to bed for a long time. In this condition there is altered perception of spatial relationship and loss of awareness of the vertical stance. On getting up from the chair, the patient thrusts his body backwards and leans about ten to fifteen degrees off the plumbline backwards. The condition may respond favourably to special rehabilitative exercises on the tilt table in the early stage.

(3) Standing balance with eyes closed

In the elderly with proprioceptive loss in the lower limbs e.g. from vitamin B12 deficiency, closing of the eyes in the standing position increases the amount of sway and unsteadiness. These old people have a tendency to fall at night when their vision cannot compensate for the proprioceptive losses.

(4) Head turning in the standing position

This manoeuvre induces unsteadiness in some elderly because of faulty proprioceptive input from cervical mechanoreceptors. Impingement of cervical osteophytes on the vertebral circulation can at times lead a drop attack.

(5) Initiation of Gait

Some old people remain rooted to the spot on attempting to walk and begin to walk only after much encouragement. Once walking is initiated, their gait appears normal. Both the standing balance and the ability to climb stairs or step over obstacles, are preserved. However, each time they attempt to walk or change direc-

tion, the same 'stammering gait' is observed. This type of gait may be due to some degree of cerebral dysfunction resulting in the old person being unable to overcome the primitive inhibitory 'don't walk reflexes' yet insufficient to produce paralysis.

(6) Gait characteristics during normal walking

Once walking is initiated, the walking pattern is analysed to detect obvious problems and functional changes. An abnormal gait may either be due to musculoskeletal or neurologic problem or it can be an adaptive manoeuvre to increase stability. Older patients usually exhibit the typical petren gait comprising of a wide base, slow short steps accompanied by flexed posture and lack of arm swing. This can be due to the adaptive response to widen the support base and to increase the stability by lowering the centre of gravity. However Parkinson's disease may also produce a similar gait pattern. In order to differentiate the two patterns, the patient may be instructed to walk as fast as possible; if the gait pattern is an adaptive response to increase stability, brisk walking will convert the gait into a nearly normal pattern of trunk posture, step height and step length. However, the older person with Parkinson's disease will be unable to pick up speed if he is asked to walk as fast as possible.

The walking speed in the elderly is also an important parameter to assess because of its relevance to the elderly as a pedestrian crossing the road and traffic signals. The elderly on an average walk slower than the speed defined as safe for crossing traffic signals. (1.4 meters/second). A Swedish study showed that the normal walking speed for elderly was 0.9 m/sec and 1.1-1.3 m/sec during hurried walking.

(7) Observation of step-height during walking

During normal walking the swing foot should clear the floor completely by about 1 to 2 ins. Old people can no longer pick up their foot as high as they could due to decreased limb coordination with age and decreased movement of the pelvis. This

predisposes them to trip easily across objects on flat ground.

Assessment of the step height during stairs climbing is also important as the elderly often encounters situations when they have to step into and out of the vehicle (bus or train). The average elderly can manage to go up and down steps of up to 30 cm height without railing. However if this step height is increased to 40 cm most old people need to hold on to a railing. A step height of 50 cm and above will pose a danger and obstacle to the old person. Elderly females have less muscular control when they step down from a height compared to males and they hit the ground more forcefully predisposing them to fracture of neck of femur.

(8) Observation of balance during turning

Some old people are stable on straight walking but become unstable during turning at which time the line of gravity falls easily out of the support base. This instability during turning can be severe in those with mild ataxia, cerebellar disease, hemiparesis and visual field defects.

MANAGEMENT OF FALLS IN THE ELDERLY

The overall assessment of instability in the elderly involves the study of the factors contributing to the fall and the performance-orientated assessment of gait. The risk of falling increases with the number of abnormalities detected and successful intervention of each abnormality no matter how small or insignificant it may be, will result in overall improvement of the mobility.

- (1) For falls due to tripping, *environmental assessment* and *manipulation* is important to prevent further falls. An office setting cannot reproduce the environment of the old person at home. Therefore a home visit provides the best opportunity to obtain an environmental checklist to improve safety at home. Simple pointers like wearing of good fitting footwear and provision of good lighting at night must not be neglected.

- (2) *Medical problems contributing to instability* must be identified however small the problem it may be. The potentially treatable problems include: visual defects, correction of vestibular balance with drugs and exercises, wearing a neck collar for severe cervical spondylosis, reversal of proprioceptive defect due to vitamin B12 deficiency, control of cardiac arrhythmias, correction of postural hypotension, treatment of Parkinsonism with drugs, stopping unnecessary hypnotic therapy, improving general mental alertness, correction of anemia or hypoxemia, calcium supplements for osteomalacia and chiropody for painful foot problems. Any of these factors especially vision, may be the final predisposing factor for a fall in the 'Final Straw Syndrome'. For instance, the old person with longstanding labyrinthine lesion e.g. Meniere's, cervical spondylosis and proprioceptive loss in both lower limbs, is normally able to compensate in the daytime by his normal vision. But when he gets up at night to pass urine, this visual cue is lost and he is liable to fall easily under the influence of night sedation.
- (3) *Exercise and training programs* are potentially useful measures to restore balance and gait problems. It is important to explain to the patient the rationale of the exercises and he must be allowed to proceed at his own pace initially. Gait training is a complex process but the following basic points must be observed:-
- (a) The old person who has been deconditioned by prolonged bed rest needs to be conditioned by sitting him out of bed first. Once sitting balance is achieved, the patient may attempt to stand before walking is attempted.
 - (b) Getting up from the seated position requires the assistance of the upper limbs. Sperling found no significant difference in strength for elbow extension between 70 year olds and younger people. Thus most elderly should be able to assist themselves to a standing position if arm rests are available and there is no pathology involving the upper limbs. Proper furniture height and design can compensate for lower limb weakness. In addition, older people with weak lower limbs may benefit from special quadriceps exercises.
 - (c) The Backward Leaning Syndrome implies a state in which the old person cannot stand upright without falling backwards. Balance may be improved by raising the heels of the shoes by 2-3 cm and the patient is encouraged to walk with a Zimmer frame with front legs shortened so that the centre of gravity moves further forwards. Lying prone everyday for 15-20 minutes may help to reset the balance. Early mobilisation after acute illness will help to prevent the balance disorder.
 - (d) The patient who is apprehensive of standing and lacks strength in the lower limbs may respond gradually to weight bearing exercises on the tilt table.
 - (e) Old people with the 'Stammering Gait' may be mobilised by reeducative physiotherapy which aims to teach the patient to lift up his feet as though climbing stairs each time he initiates walking. If the physiotherapist places her foot in front of the patient's foot and asks him to step over it, walking can be initiated. The same effect may be achieved by stepping over a flexible band attached to the back legs of the walking frame.
 - (f) During the stage of walking exercise, a frame is preferable to a stick since it allows the centre of gravity to fall between the feet. Walking with a stick encourages the centre of gravity to fall to one side outside the support base. A frame with wheels may allow a more normal gait as the patient does not need to stop at each step and lift up the frame.

- (g) Repeated fallers must be given special balance exercises and instructions on how to get up after a fall. The persistent fallers may eventually develop the 3 F's Syndrome (Fear of Further Falling) if they are neglected. These elderly people exhibit gross sweeping and staggering movements during walking. If left alone after falling some may lie on the ground for long periods, the so-called 'post fall

syndrome' which carries a poor prognosis. It is important for the health therapist to restore the confidence and relieve the anxiety of these patients. Poor motivation may result from unrealistic expectations, depression and cultural belief that old age is the time to be taken care of. The physiotherapist must identify the reasons for poor motivation and find ways to improve the performance of the repeated faller.

THE GENERAL PRACTITIONER AND THE DEPENDANT ELDERLY AT HOME

Dr Anne Merriman, MBBCh, DCH, MRCP (I), MRCP (UK),
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INTRODUCTION

It is very difficult to estimate the size of the problem of the dependant elderly in the community in Singapore, as general practitioners have a movable list of patients due to the custom of "doctor hopping". However from Table 1, taken from the Senior Citizens Service Annual Report of MCD, 1986, it can be seen that the estimated numbers of non-ambulant or dependant elderly will be expected to increase from 1,800 in 1980 to 4,600 in the year 2000.

These figures are frightening enough to make today's general practitioner take the care of the elderly in his practice very seriously.

Two questions arise:

- 1) Can we prevent total dependency, or at least delay it?
- 2) How can we best as doctors help these dependant elderly and their carers?

The answer to the first question is that we can prevent or delay dependency by adequate assessment and implementation of rehabilitation at the point of illness in the elderly frail. The organisation of such services has been discussed in a previous paper.¹ However in a recent paper estimating the effects of 30 years of geriatric medicine on elderly in hospital and the community in UK, it was found

that dependency had been delayed and that quality of life was improved, but due to the excellent geriatric care of the dependant in long stay wards, the dependant were living longer.²

The answer to the second question requires a review of our Singapore situation.

To look at this, I am taking some figures from 2 recent studies recently carried out in Singapore and soon to be published. The first study looked at the problem of the elderly who present in A&E throughout Singapore over a 2 week period in 1987. The second study looked at the medical problems of the high dependency elderly in Woodlands Home for the aged, March and April 1987.

THE ELDERLY PRESENTING IN A&E

738 presented over a 2 week period. Of these only 21% had been seen previously by a doctor, so the majority went to A&E as their first resort.

Of those over 70's presenting at A&E only 52% were independent in self care. 14% were dependent on an aid, and 33% dependent on others for the activities of daily living. Thus 48% were the more dependant elderly. Remembering that this group made up only 3.7% of the general population over 65 in 1980, it can be seen that the dependent elderly are high users of this service.

Looking at the living arrangements for the totally dependant third of elderly presenting to A&E, only 4.5% were living in a home for the aged. Thus 95% were living in the community and could have been under the care of a general practitioner.

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TABLE 1
ESTIMATED DISTRIBUTION OF ELDERLY POPULATION BY FUNCTIONAL STATUS

Functional Status	1980		2000		Increase	
	'000	%	'000	%	'000	%
A) Ambulant	167.2	96.3	289.7	94.7	122.5	73.2
B) Require Assistance	4.6	2.7	11.6	3.8	7.0	152.0
C) Non-ambulant	1.8	1.0	4.6	1.5	2.8	156.0
Total	173.6	100.0	305.9	100.0	132.3	76.1

Remarks:

While the increase of the healthy ambulant elderly from 1980 to 2000 is 73.2%, the increase in types B and C are 152% and 156% respectively. This means that the number of elderly becoming more dependent will increase.

Source:

Senior Citizens Service Annual Report 1986, MCD.

The outcome of the trip to the A&E led to admission in 62% of these elderly.

Admission to hospital can be a psychological and physical disaster to the frail elderly patient. This is even true where geriatric medicine is well established and these patients come under the care of specialists in care of the elderly with nursing staff trained in their special needs. However in countries where there is no such training for nurses and doctors, and services are streamlined to support the system specialities for younger people the chances of improvement are quite slim. It is now well documented that the elderly do better if treated in their own environment, i.e. the community, if one doctor with knowledge of the patient and the needs of the elderly, takes overall responsibility for their health, geared towards optimum independence within the patients own environment. However there are some instances where hospital admission is essential. The role of the general practitioner is to decide which patients could stay and be treated in the community. Thus he must be confident in treating the diseases in the elderly and be aware of the services available in his area.

However many relatives as well as doctors and nurses panic when presented with a sick elderly. The hospital admission is too often seen as the panacea for all ills and a quick way to take a worrisome case off our hands without any medicolegal repercussions, and transferring the agitated relatives to the backs of the hospital staff!

Our dependant elderly need:

- 1) doctors who are confident and knowledgeable in dealing with the elderly frail.
- 2) doctors who are willing to do home assessment visits at a cost which they can afford,
- 3) doctors with access to other members of the team for nursing, rehabilitation, social assessments and carer support.

In order to be confident, the doctor needs to be knowledgeable. There are now many books written about geriatric medicine based on the experiences in countries with large populations of elderly and well established geriatric services. Some of these books are large and formidable and best used for reference, e.g. Brocklehurst, and Pathy (in the library of the College). However over the last few years smaller books have been published and some are available here in Singapore. A list of such books is given at the end of this paper. The recent publication by Williamson is geared towards the primary care physician.

However in dealing with the frail and dependant elderly certain conditions are common and have to be reviewed by the attending general practitioner. To give an idea of some of these problems in the Singapore context, I have included Table 2.

PROBLEMS OF THE DEPENDANT ELDERLY

Table 2 shows the medical problems identified by myself when assessing 62 chronic aged sick at Woodlands home in

TABLE 2
CHRONIC AGED SICK (AGED 50-59)
WOODLANDS HOME 1987 (N = 62)

Obvious Medical Problems	%	No
Skin Problems	43.5	27
Neurological Deficit	38.8	24
Cataracts	38.7	24
Other Eye Problems	12.8	8
Contractures (Total)	33.9	21
Contractures due to Disuse	20.1	13
Deafness or Wax	35.4	22
Dementia	14.5	9
Diabetes	9.7	6
Hypertension	6.4	4
Incontinence	6.4	4
Amputee	6.4	4

1987. They are all dependants had been in Woodlands from 1-20 years although half had been there for only 2-5 years. These problems give an idea of the kind of common problems that the general practitioner will expect when caring for the dependant elderly. Practitioners can familiarise themselves with the prevention and management of these complications.

Doctors who are willing to do home assessment visits at a cost which they can afford

This is a matter which I think you should discuss between yourselves. There is no doubt that this service is needed more and more as a population ages. The best way to manage it, time and finance wise, is up to you to decide. However if a team is used, and a nurse trained in the needs of the elderly carries out the regular assessment of patient and relatives, with the doctor doing the initial assessment and reviews when advised by the nurse, an efficient and appropriate service can be set up.

Doctors with access to other members of the team for nursing, rehabilitation, social assessments and carer support

Doctors sometimes have difficulty working with paramedical teams. It is most necessary for the support of the elderly patient that we have good rapport with our colleagues and the team. This arises from mutual respect for each others role in the care of the patient, avoiding the jealously guarded "this is my territory keep out"

syndrome so prevalent among the medical fraternity in Singapore. If we are all working for the good of the elderly patient, there will be good rapport with the nurse and paramedical staff. Ideally the general practitioner should also have access to a specialist to assist him at a home visit in problem cases.

CONCLUSION

In Singapore where there is a dearth of specialists in geriatric medicine, the caring general practitioner is the mainstay of appropriate health care for the elderly. As the population ages, it is time for the services at primary care level to be reviewed in the light of the special needs of this sector of the population. With the help of the College, recommendations for further training overseas for a few, and teaching sessions for all could be introduced. The recently introduced Diploma in Geriatric Medicine from the Royal College of Physicians in London is encouraging and further information is available on the courses leading to this diploma from the journal Geriatric Medicine available in the College library.

REFERENCES

1. Merriman A. Geriatric Medicine in Singapore: Quo Vadis? *Ann Acad Med S'pore*. January 1987, 16; 1: 155-162.
2. Stout RW, Vivienne Crawford. Active-life expectancy and terminal dependency: Trends in long-term geriatric care over 33 years. *Lancet*, 6 Feb, 1988; 281-3.

Reference Books

Pathy: Principles and Practice of Geriatric Medicine, 1985, Wiley Brocklehurst: Textbook of Geriatric Medicine and Gerontology, Third Edition 1985, Churchill Livingstone.

Smaller Books

Coni, Davison and Webster, Lecture Notes in Geriatric Medicine, Blackwell Scientific Publications.

Williamson, Smith, Burley, Primary Care of the Elderly, A Practical Approach, Wright, 1987.

Coni, Davison, Reiss, The Geriatric Prescriber 1987, Blackwell Scientific Publications.

Journals

Age and Ageing, Journal of the British Geriatric Society.

THE FIRST ANNUAL SCIENTIFIC CONFERENCE: 12 NOV 1988

OPENING ADDRESS

**Dr Chew Chin Hin, MBBS (HK), FRCP (Edin),
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It is indeed a privilege to be asked by the President of the College of General Practitioners of Singapore to officiate at the opening of this first Annual Scientific Conference. This event is most significant to the College and to our medical fraternity and I am sure it will be the fore-runner of many more scientific conferences to come.

Francis Bacon wrote "*Reading maketh a full man, conference a ready man and writing an exact man*". Medical conferences should therefore be encouraged because they provide the participant with several facets in the total education of the doctor. They provide the opportunities to experience the process of medical thinking both in the content of the papers presented as well as the discussions and debates that follow. The ability to weigh and consider, to communicate one's views and deliberations in a constructive way are skills that would be tested at the scientific sessions. Last but by no means less important, medical conferences provide opportunities for doctors to meet and interact socially. This is particularly important in the Singapore context especially, for many general practitioners work in their own clinics alone and may become socially, if not professionally isolated.

For many years, the Ministry of Health has been involved with the training of specialists. Singapore needs specialists not only to care for her citizens, but also to pro-

vide the necessary expertise to promote Singapore as a medical centre of excellence. It is not uncommon or improper for well trained specialists to leave our hospitals for the private sector. There they will still be able to continue to contribute their skills to our community.

The Ministry together with the College of General Practitioners and the Academy of Medicine moved into this restored College of Medicine Building just over a year ago. I am glad that both these professional post-graduate institutions have settled in nicely and are grappling with the challenges at hand. Our physical proximity to one another has made for easier communication and planning of programmes for the upgrading of medical practice in Singapore.

Each yearly cohort of doctors require further training of some measure to better enable them to fulfil useful places in the medical fraternity. About half the cohort are destined to be family physicians. In the past young doctors wishing to make family medicine their career had to plan a programme of training by themselves and given lots of good fortune would manage to obtain postings relevant to family practice, while others may have gone into private practice without the appropriate experience.

The College of General Practitioners has since its inception in 1971 been working steadfastly to improve the standards, standing and recognition of family practice. It has contributed to the decision by the National University of Singapore to accept the subject of family medicine as an academic discipline in the undergraduate curriculum. It is committed to the continu-

*Dy Director of Medical Services (Hospitals)
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ing medical education programme of the Medical Council and in ensuring success.

The Ministry has of late turned its sights to the training of family physicians and hopes that with the continued co-operation of your College and the Department of Community, Occupational and Family Medicine of the University, a structured programme of training for family medicine practitioners will be successfully implemented while the doctor is still a junior Medical Officer in the service of the Ministry. I am therefore very pleased that the College has helped the Ministry in this regard and has developed and initiated the vocational training programme for our doctors intending to embark on a career in general practice, albeit on a pilot basis. I am confident that this will evolve into an established vocational training programme as we work together towards this end.

General practice must be seen to be a rewarding discipline and the myth of general practitioners as doctors simply for the treatment of minor ailments such as cough and colds should be quickly put to rest. There is much that general practitioners (GPs) can do. Public expectations must be changed so that they will realise and recognise the true role of the general practitioner. The complaint today of overcrowding at the Accident & Emergency (A&E) Departments and in acute wards of hospitals could to a good measure be solved if the public knows how to turn to their family doctors for early assistance and consultation.

Faith and trust in their GPs could be further enhanced so that unnecessary visits to specialists could be curtailed. Rather than prevent patients seeking specialist help directly, the challenge is for family physicians to attract patients to their sphere of care. Cost is one factor, but more importantly, the standard of medical practice should be uplifted to such levels that patients can have full confidence in their family physicians.

Besides conducting the recently implemented family medicine seminars, I am pleased to note that your College has seen the need for a Scientific Conference to keep your members abreast of new developments on a fast and ever-expanding medical horizon. A well thought-out programme has been prepared together with a scientific exhibition. While we as doctors strive to find new modes of treatment and approaches to diseases, the hallmarks of a well-rounded physician is his ability to provide preventive medical education and care to his patients to keep them healthy. The family physician is best placed to ensure this and for every patient of his.

To our friends from overseas, I would like to extend a very warm welcome to you and offer our hospitality and to all I wish much profit in your deliberations.

I have now great pleasure in declaring this Conference open.

FIRST ANNUAL SCIENTIFIC CONFERENCE

AMBULATORY CARE — PLACE OF RESEARCH

Dr Chan Swee Mong, *MBBS (S'pore), FCGP (S'pore)*

Ambulatory care medicine constitutes the bulk of the work done by the General Practitioners/Family Physicians (GPs). It is a pity that the GPs' accumulated knowledge and expertise had remained largely unknown. It is only after the 1950s with the founding of Colleges and Academies of General Practice/Family Medicine that an attempt has been made to study general practice/family medicine seriously. This paper therefore illustrates the usefulness of practice-based research and how the GPs can still play a leading role in it.

PROSPECTS

In the future, prospects are good that GPs will play an increasing role in research into clinical problems affecting their patients. Three developments have made this possible, namely:-

- i) the introduction of portable office diagnostic and laboratory equipment, making diagnoses more definite.
- ii) the increasing use of micro-computers by GPs allowing information to be processed on a scale never possible before.
- iii) the greater supply of doctors in Singapore,¹ enabling doctors to see patients more leisurely and perhaps for those interested, to convert some of their free time into research work.

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CLINIC ORGANISATION

It is important that basic facilities exist in the clinic before the GP attempts to do research. Apart from the purchases of medical equipment, there must be proper medical record keeping and a basic computer system for electronic data entry and retrieval. In most instances a personal computer system is all that is needed. The GP must also train his clinic assistants well and impart to them the principles and philosophy of research which in the final run is an attempt to improve on the care of his patients. We find the computer useful in the following:

- a) keeping tract of all medicines purchased.
- b) keeping tract of all laboratory specimens and x-rays done.
- c) keeping information on specific research projects — e.g hepatitis B, PAP smear.

DIFFERENCES

Why is research in ambulatory care medicine as important as research in hospital medicine? The reasons may be attributed to the following:

- i) collectively GPs and Government Out-patient Primary Care Doctors (GOPCDs) see and reach more patients than their hospital-based colleagues as 95% of illnesses and problems are seen in general practice patients vis-a-vis 5% in hospital-based patients.
- ii) due to their closer doctor-patient relationship, GPs and GOPCDs can exert an effective influence on treatment, prevention and health education on

most of the major diseases seen in their patients. This is important as competent management of major illnesses can result in lesser complications and hence lesser admissions to hospitals. Only through research can the medical profession and health planners obtain such vital information which can be very different from that collected from hospital morbidity studies.

- iii) some of the problems encountered in primary care/family practice are unique and not commonly seen in the hospitals. These concern e.g. the worried-well patients, the psychosomatics, the malingerers, drug addicts and patients with socio-economic problems. Understanding these patients through careful research efforts can yield a lot of knowledge on human psychology, cut down on work absenteeism, and contribute to a more productive and caring society.

PRACTICE PROFILE

The usefulness and need for research on ambulatory care patients are shown in Tables 1, 2, 3 and 4. These data came from my clinic morbidity study conducted from 1st October to 31st December 1984. All in, 3279 consecutive patients were seen and treated.

Table 1 shows the age distribution of my patient population.

TABLE 1: AGE OF PATIENT POPULATION

Age Group	No.	%
<10 yrs	654	19.9
10-19 + yrs	399	12.2
20-29 + yrs	834	25.4
30-39 + yrs	540	16.5
40-49 + yrs	321	9.8
50-59 + yrs	191	5.8
60-69 + yrs	180	5.5
70-79 + yrs	120	3.7
80-89 + yrs	33	1.0
90 + yrs	7	0.2
TOTAL:	3279	100.0%

The figures show that my practice population was "younger" than I thought: 74% of patients were less than 40 years

compared to 10.4% of patients who were senior citizens (defined as those 60 years and above).

Table 2 shows the racial and sex distribution of my patients. It is predominantly Chinese (87%).

TABLE 2: RACE AND SEX DISTRIBUTION OF PATIENT POPULATION

Race	No. Male	%	No. Female	%
Chinese	1382	82.6	1476	91.9
Malay	73	4.4	63	3.9
Indian	102	6.1	30	1.9
Others	9	0.5	4	0.3
Foreigners	107	64.4	33	2.0
TOTAL:	1673	100.0%	1606	100.0%

Note: "Foreigners" refer to male construction workers from Malaysia, Thailand and India, and maids from the Philippines.

Table 3 shows the occupations of my patients. The criteria for these groupings were taken from Singapore's Ministry of Labour guidelines. Two additional groups were created to cater for "students" and "others".

TABLE 3: OCCUPATIONS OF PATIENT POPULATION

Occupational Group	No.	%
Prof, Admin, & Exec Staff	198	6.0
Clerical & Related Staff	383	11.7
Sales Workers	48	1.5
Service Workers	136	4.2
Agri, Fishing & timber	17	0.5
Transport Workers	80	2.4
Production Workers	673	20.5
Students (all standards)	453	13.8
Others (retirees, housewives unemployed)	1291	39.4
TOTAL:	3279	100.0

The figures show that working patients accounted for 46.8% as compared to 13.8% for students. "Others" comprising housewives, retirees and unemployed persons accounted for a large 39.4% of the patient population. It is interesting to note that wage-earners constitute only 46.8% of the patient population.

In Table 4 below, the type of patients consulting me was studied. "First-time registrants" accounted for only 17.5% versus 17.6% of patients attending for the "same" illnesses during the period of study. "Regular patients" accounted for 53.5% of patients whilst "Irregular patients" (those consulting once in 2 or more years) accounted for 10.7%. "House-call patients" came in last with 0.7%.

TABLE 4: TYPE OF PATIENTS (REGULARITY)

Type of Patients	No.	%
First Time Registrants	574	17.5
Patients attending for "same" illnesses	579	17.6
Regular Patients	1754	53.5
Irregular Patients	350	10.7
House-call Patients	22	0.7
TOTAL:	3279	100.0

Each of these categories of patients has different reasons for consulting the GP. The % of "First-timers" in an established clinic may indicate how many new patients are being "attracted" to the clinic while the % of "Regular patients" may represent the bulk of the practice population. "Patients attending for the same illnesses" probably represent the more difficult cases met with in practice e.g. the recurrent coughs and colds, status asthmaticus, allergies, epileptics, psychiatric patients, chronic diabetic and hypertensive patients and are potentially rich materials for specific research efforts. Although house-calls were few, they provide GPs the opportunity to do "in-house" medical care and the chance to interact with other members of the families.

The above Tables 1, 2, 3 and 4 give useful data on the patient population. We can use the above information to improve our clinic's services and facilities in the following manner:

- i) to identify relevant research projects.
- ii) to improve our practice management skills e.g. selection of clinic assistants and the type of medical and laboratory instruments to buy.
- iii) to plan our continuing medical education programme so that it is up-to-date and relevant to the type of medical problems seen in our practice.

PRACTICE MEDICAL PROBLEMS

The above study also focussed on the clinic morbidity pattern. The International Classification of Health Problems in Primary Care (ICHPPC) 2nd edition was used to define the health problems encountered. Table 5(a) shows a breakdown of the medical problems encountered in my practice for 3 months from 1/10/84 to 31/12/84, and also data from the Government outpatient clinics for the year 1984 as contained in the Ministry of Health's 1984 Annual Report.

The following comments can be made about Table 5(a) and 5(b):-

- i) both GPs and GOPCDs see and manage a wide spectrum of diseases and other health problems in the community.
- ii) there are some similarities and differences in the type of patients seen in the GP-clinic and in the Government Outpatient Clinics, namely:
 - a) in both situations respiratory diseases accounted for slightly more than 1/3 of cases.
 - b) more patients (31.2%) going to government outpatient clinics for treatment of chronic illnesses like hypertension, heart failure, ischaemic heart disease, diabetes mellitus, malignancies, mental and nervous system disorders as compared to 9.4% of patients seeing the GP concerned for similar health problems.
 - c) more patients (23.8%) seeing the GP concerned compared to fewer patients (10.4%) seeing GOPCDs for acute illnesses from infective and parasitic causes, gastro-intestinal disorders, injuries, pregnancies and related conditions.
 - d) "other conditions" in Table 5(b) represent 20.9% of cases seen by the GP concerned, and further emphasise the diversity of health problems met with in general/family practice. These range from health screening, immunisations, minor surgery to counselling of patients' family problems. Furthermore not all problems in primary care have clear-cut diagnoses.

TABLE 5(A): CLASSIFICATION OF HEALTH PROBLEMS IN PRIMARY CARE

Type of Problem	GP-Study		OPD Yr 1984	
	No.	%	No.	%
Respiratory Syst.	1208	36.8	818896	39.9
Circulatory Syst.	136	4.1	322679	15.9
Neoplasms, Endocrine, & Nutri, & Metabolic	109	3.3	211609	10.3
Skin, Subcut. Tissue & Musculo-skeletal	239	7.3	201050	9.9
Other Conditions	684	20.9	142501	7.0
Blood, CNS, Mental	65	2.0	105662	5.2
Infective & Parasitic	264	8.1	76397	3.7
GIT disorders	218	6.7	73852	3.6
Injuries (work/home)	204	6.2	60323	2.9
Genito-urinary Syst.	58	1.8	33659	1.6
Preg, Childbirth & Puerp.	93	2.8	3095	0.2
Congenital Anomalies	1	0.0	162	0.0
TOTAL:	3279	100%	2050885	100%

The practice morbidity survey and data from the government outpatient primary care clinics show that clinical materials of all sorts and descriptions are never lacking in any ambulatory care clinics, and certainly provide fertile grounds for the serious researcher to explore.

TABLE 5(B): SUBCLASSIFICATION OF "OTHER CONDITIONS" IN GP-STUDY

Type of Problem	No.	%
Signs, symptoms & ill-def. conditions	369	46.1%
Social, Marital & Family Problems	18	3.1%
Health Screening, immunisations	94	16.1%
Family Planning	39	6.6%
Repeat prescriptions	128	21.9%
Minor surgical procedures/ Dressings	36	6.2%
TOTAL:	684	100.0%

CONCLUSION

In short, there will always be a place for research in ambulatory care medicine since 95% of the daily illnesses and health-related problems in the country are treated by physicians who are mainly the GPs and their counterparts in government outpatient clinics. The practice morbidity study has given us a glimpse of the wide variety of health problems encountered in general/family practice. If only GPs and GOPCDs can rise to this challenge of doing more research work in ambulatory care medicine, their contributions to the progress of medical science will be enormous. This will certainly contribute to better standards of medical care for our patients.

REFERENCE

1. Leong VC. Measuring Medical Manpower Adequately. *Sing Fam Physician*, 1988; 14(1): 4-6.

FIRST ANNUAL SCIENTIFIC CONFERENCE

NEW PERSPECTIVE IN GENERAL PRACTICE — INPATIENT CARE IN THE COMMUNITY HOSPITAL

**Dr Chen Ai Ju, MBBS (S'pore), Diploma in Child Health
(London), Diploma in Public Health (Liverpool),
Diploma in Tropical Medicine & Health**

The role of general practice in improving the health of Singaporeans cannot be underscored. It is through the strong network of general practitioners or primary care physicians in Singapore that we can claim health care is available and accessible to all Singaporeans. The recognition today of the importance of general practitioners or GPs has been shown by the establishment of programmes for the undergraduate, vocational training and continuing medical education of primary care physicians, under the tripartite arrangement between the College of General Practitioners Singapore, the National University of Singapore and the Ministry of Health.

However, must the health care system by design confine GPs to only providing ambulatory care and making the occasional house calls? Can GPs not provide some inpatient care as well? In some cases, GPs with their knowledge of the patients, may be better able to analyse the patients' symptoms than a specialist. By taking away some patientload from the specialists, it will also enable them to concentrate their expertise on the very patients that need their help.

The availability of Community Hospital (CH) facilities to GPs will be a step forward towards allowing GPs to achieve their goal of extending personal, continuing and comprehensive care to patients. Moreover, the

focus of GPs providing total and cost effective patient management will be enhanced with inpatient and day care facilities accessible to them.

What is a CH and how is it different from the acute general or the chronic sick hospitals we have in Singapore today? The CH is conceived as a hospital providing day as well as inpatient care. It will be located near where people live and therefore near to GP practices and it will be equipped with all the necessary equipment. Such a hospital will provide facilities for patients for whom medical and nursing care needed cannot reasonably be available in their homes. They need hospital care. But, they generally do not require highly sophisticated attention or special investigations. Such patients would include the medical and surgical convalescent cases, the elderly sick, the terminally ill and the short term admission of cases such as pneumonia, fever, anaemia, etc for investigation and treatment.

The CH will grant admitting right to accredited GPs so that they could continue to look after their patients in the hospital. A core of resident doctors will be available to complement the services of the private medical practitioners. There is also consultant coverage by physicians and surgeons from the acute general hospitals. Doctors with admitting privileges who wish to continue with the management of their patients in CH are allowed to admit them without prior clearance by the resident doctors subject to bed availability. In addition, if GPs do not wish to continue looking after the patient in the hospital, they can

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refer the appropriate cases to the CH doctors who would determine the merit of each case for admission.

Besides inpatient care, the hospital will provide facilities for day care, day assessment, minor surgery, patient education, laboratory, radiology and rehabilitation. GPs can refer and have access to these facilities.

The need for CHs is felt more acutely today because in the context of present day urban living and ageing of the population where chronic, degenerative conditions are replacing acute infectious diseases, to be able only to provide ambulatory care may not be adequate. There are 3 main areas where the CH may be able to complement ambulatory care and therefore contribute to the effective functioning of GPs:

- (i) *Inpatient Care.* Some patients, especially the elderly and disabled cannot be satisfactorily managed at home because without the presence of adequately trained home care givers, follow-up care is extremely difficult. Observation, assessment and therapeutic monitoring of such patients may be better done on an inpatient or day basis. In other cases, maintaining a terminally ill patient who require tube feeding and pain control drugs or a sick disabled person in the home may be achieved only at an enormous cost, in terms of the health and general well-being of the other members of the family. Stroke patients after the initial treatment in an acute hospital, can also be better managed in a CH setting for a period of 2-6 weeks, for rehabilitation. The availability of inpatient care at the CH therefore offer an alternative option to the GP's management plan for the patient. Presently, the only recourse for GPs is to refer to the acute hospitals for the patient to be managed by a team of hospital doctors. For some patients who do not require the sophisticated setup of acute hospitals, not only is there no advantage to do so but unnecessary tests and time may be lost because the hospital doctors will not know the patient well.

The patient may also be lost and confused to be managed by a different group of medical personnel. In the end, a less satisfactory service is provided to the patient at a higher cost. It is also less satisfying to the GP who has to lose charge of his patient to the hospital until after his discharge and where he may not be able to obtain a full picture of what has been done in the hospital.

- (ii) The second area in which CH may enhance GP's work is *Early Diagnosis*. GPs are involved at an early stage of a patient's disease, when symptoms have yet to be organised into illness. To be able to come to an early diagnosis, besides clinical skills and acumen, there are today many diagnostic tools and techniques which can assist doctors.

Being trained in these techniques and yet not being able to use them because of lack of instruments or equipment which could only be cost effectively provided in hospitals are some of the limitations today of GP practice. As an example, the control of the more difficult cases of diabetes and hypertension can be done at CH with supportive laboratory and other facilities. Treatment of cellulitis or bad chest infection can also be done by GPs in CH. It is sometimes because of the lack of such facilities that limits GP's scope of work which has resulted in the public image of GPs being "cough and cold" doctors only. Some of the diagnostic and treatment procedures may also required to be done in an inpatient setting. GPs will be allowed to make use of the equipment and facilities and have the opportunity of ordering tests and procedures to be done without losing charge of the patients.

Another advantage is that in the CH, the GP will have the opportunity for "on the spot or corridor consultation" of seeking a second opinion from the various specialists in the CH. There will also be more opportunity for the

GP to discuss patient's progress with the nursing staff. Thus, the scope and potential of practice for the GP will be much widened.

- (iii) Another contribution of the CH is *Patient Education and Family Training*. In chronic disease control, behaviour modification to reduce risks and worsening of condition and compliance with medication are essential. With episodic contact with the doctor, chronic disease control may be patchy unless there is strong conviction on the part of the patient for continuous treatment. For many patients, involvement and support from family members is also important. The CH will allow the GP to have longer interaction with the patient and his family members. GPs can then persuade and demonstrate to patients the expected benefits and possible complications which will take place with therapy. All these will lead to better patient compliance. The GP will also be in a better position to judge whether the proposed plan of management is acceptable and practical for each individual patient.

In other instances, a period of adaptation to a new way of life, and learning new skills may be crucial towards achieving a better quality of life for the patient. It is at the CH where patients, especially the older ones recovering from say an episode of myocardial infarct, or hemicolectomy with colostomy or amputation of limb can recuperate and re-adjust his way of life back to home living away from intensive hospital care. The nursing staff could also demonstrate and train family members on how to look after the patient.

The CH will also serve as training ground for GPs. In terms of effective health care for the people, the fundamental need is strong primary health care. It is therefore vital that we seek to upgrade the knowledge and skill of GPs. The undergraduate course only provides the basic training in clinical methods and manage-

ment of medical problems. It does not and cannot claim to provide any formal training for General Practice with its emphasis on prevention, early diagnosis, continuous care and rehabilitation. The CH will function as an important institution for the vocational training of GPs. It will have the physical facilities, the consultation rooms and conference rooms for case reviews, discussion and tutorials. Library facilities and other educational aids will also be available.

Unlike acute hospitals, the CH will be less capital and labour intensive. The management will be less hierarchical and more flexible. Therefore it will be less costly to operate and the lower cost will be passed on to the patient. Being lower cost and lower activity, patients will be allowed to stay longer in the hospital, say 2-4 weeks, depending on the condition.

The Government is planning to build the first CH to be located in a 2-hectare site in Ang Mo Kio Avenue 9. The CH is 200-bedded providing inpatient, day surgery and day care, rehabilitative and other supportive facilities. It is scheduled to be completed in 1991. It will provide a cheaper alternative in a more homely environment and under the care of their own family doctors for those patients who do not need the high technology and specialised care of acute general hospitals. It will cater to an unmet need of the community by providing an intermediate level of care currently not available. Its service is intermediate between acute and chronic.

The CH can be said to function as an interphase between GP ambulatory care and hospital based specialist care. It will complement the role of acute hospitals to fill the unmet need which exist today for some patients. By giving GPs the opportunity of managing their patients on an inpatient basis, it will complement and reinforce the effectiveness of primary care in providing comprehensive and continuing care to patients. In summary, the CH will not only benefit patients, but also give GPs the satisfaction of providing a better service to their patients.

HOME STUDY SECTION

ANTIDEPRESSANTS

Dr Omar B S T, MBBS (S'pore), MCGP (S'pore), FRACGP

Many studies have confirmed that between 10 and 25% of the population suffer from depression. Estimates of the lifetime risk of depression are between 8 and 12% for men and 20 to 26% for women. Antidepressant drugs are most useful when there are clinical features of a depressive syndrome. A few guidelines will increase the effective use of these in general practice.

RECOGNISING DEPRESSION

The vast majority of patients with depression presenting to family physicians often complain of somatic symptoms. The frequency, treatability, and potentially serious consequences of depression make its diagnosis and management high priorities for the family physician. Unfortunately, the diagnosis is not always evident because the symptoms may masquerade as a variety of psychiatric or somatic symptoms (Table 1).

Depression can be a normal mood state and rarely last more than a few days. A depressed mood can also be part of a bereavement reaction: a normal psychological response. Depression can be severe enough to be diagnosed as an illness in its own right.

Depressive illness can be either primary or secondary (Figure 1). Secondary depressions are those which occur in the presence of a physical illness such as malignancy, endocrine disorders, post viral infections or drug induced disorders; or psychiatric disorder such as schizophrenia, alcoholism or personality disturbance disorders.

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TABLE 1: CLINICAL PRESENTATION OF DEPRESSIVE SYMPTOMS

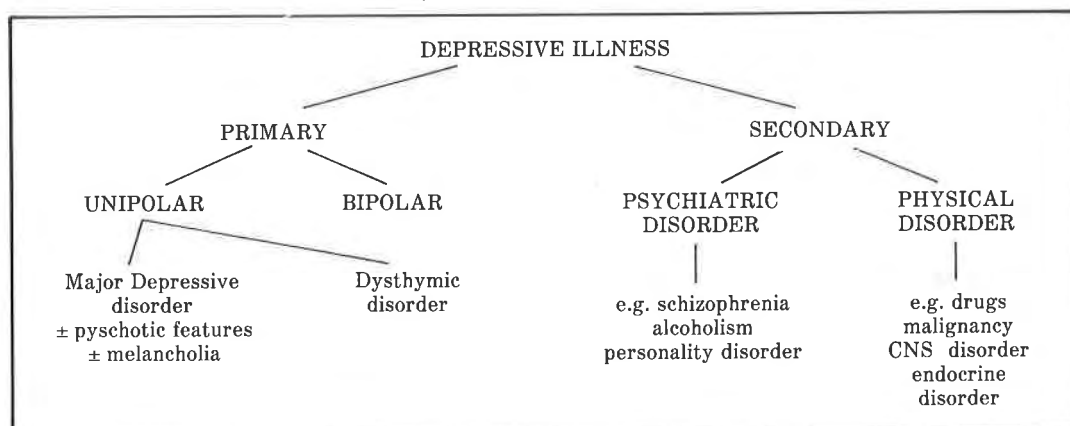
Psychological symptoms and signs
mood sad, blue, "down in the dumps"
depressed effect
poor self-esteem
anxiety
irritability or anger
loss of interest in environment
anhedonia [lack of pleasure]
social withdrawal
guilt [may be delusional]
feelings of helplessness or hopelessness
multiple physical complaints of hypochondriacal fears
rumination, obsessive thoughts
poor concentration
decreased libido
recurrent thoughts of death or suicide
psychotic symptoms may occur [e.g. delusions]
Vegetative symptoms
decreased energy
sleep disturbance [most commonly early morning awakening]
appetite disturbance [usually loss of interest in food; anorexia]
diurnal variation in mood [usually worse in the morning]
psychomotor retardation or agitation

Recurrent affective disorder can be unipolar (depressive episodes alone) or bipolar (both depression and mania). Major depressive disorders and dysthymic disorders, correspond to the previous classification of endogenous (psychotic) and reactive (neurotic) depression.

THE DECISION TO TREAT

Once a diagnosis of depressive illness has been made the decision to treat will follow, and will involve in most patients a range of social and psychotherapeutic measures, as well as physical methods. Here we are concerned only with the use of antidepressants; their prescription constitutes a positive decision and is not a mere attempt to alleviate or instigate unhappiness.

Figure 1: Classification of depressive illness



Although every such decision is in the nature of a clinical experiment, treatment must be carried through with consistency and conviction. Nothing is more demoralising for a depressed patient than repeated vacillating and changing of drugs which may often be given in a dose too low, or far too short a time to be effective. It is essential to convey confidence to the patient by explaining carefully what can be expected from a prescription, after how long an interval. Antidepressants usually produce their response after about two to three weeks, and it is during this delay that the side effects are at their most discouraging, adding as they do to the distress caused by illness itself. Support and judicious reassurance are most needed during this phase.

CLASSIFICATION OF ANTIDEPRESSANTS

Major depressive illnesses have a biochemical basis and are thought to be due to abnormalities of the monoamine neurotransmitters in the brain such as noradrenaline and serotonin. Most effective antidepressant drugs affect the concentration of these neurotransmitters at the synapse.

As a matter of practice it is wise to become familiar with a few of the many antidepressants available and to use them with confidence. It is also best to avoid the newest antidepressants until adequate trials have been published. There are three

major classes of antidepressants:

- 1) Tricyclic antidepressants
- 2) Novel, atypical, or second-generation antidepressants
- 3) Monoamine oxidase inhibitors (MAOIs)

Tricyclic antidepressants are chemically related to the phenothiazines. This group of antidepressants include the closely related agents amitriptyline, nortriptyline, imipramine, trimipramine, doxepin and dothiepin. They act by enhancing neurotransmission in monoamine neuronal pathways by inhibiting (in varying degree) the uptake of monoamines such as serotonin, noradrenaline and dopamine.

Tricyclic antidepressants available since the early 1960s have been the mainstay of drug treatment of depression. In controlled trials they have been demonstrated to be effective in producing remission in 60 to 70% of depressed patients. The more the illness resembles a biological or endogenous depression the greater the chance of a response to tricyclic antidepressants.

Tricyclics have a long plasma half-life (more than 24 hours) and can be given once daily. A single night dose is preferable for sleepless patients and this simple regimen helps in compliance. In elderly patients who are more likely to experience side effects, divided doses should be used.

In addition to their undoubted antidepressant effects tricyclics also possess central and peripheral anticholinergic

effects and quite substantial antihistaminic properties. A wide range of adverse effects is associated with the use of tricyclic antidepressants (Table 2). The frequency and severity of particular effects depend on the particular drug used, dosage, duration of treatment and individual sensitivity of the patient. The elderly, either as a result of altered sensitivity or differences in drug disposition and metabolism are particularly sensitive to the cardiovascular and autonomic effects of tricyclics.

Significant drug interactions with tricyclic antidepressants are shown in Table 3.

TABLE 2: ADVERSE EFFECTS OF ANTIDEPRESSANTS

	Tricyclics	MAOIs
Autonomic	dry mouth blurring of vision sweating urinary retention glaucoma paralytic ileus	dry mouth blurring of vision constipation excessive sweating difficulty in micturition
Cardiovascular	tachycardia hypotension delayed atrioventricular conduction	hypotension
Central nervous system	sedation cognitive disturbance tremor seizures	tremor paraesthesia seizures
Others	weight gain mood switch	hepatotoxicity ankle oedema skin rash mood rash

Novel, atypical, or second-generation antidepressants differ structurally from the tricyclics and they also have varied pharmacological properties. They include mianserin (blocks serotonin receptors and α_2 adrenoreceptors), maprotiline (blocks noradrenaline uptake) and trazodone (blocks α_1 -adrenoreceptors). Mianserin and maprotiline are tetracyclics and trazodone is a triazalopyridine. Tetracyclic antidepressants and their associates usually are most beneficial in those patients displaying psychomotor retardation and quiet, ruminating depressive thoughts (without delusional content). Manic depressive conditions are in this group.

Since these drugs are relatively free from peripheral anti-cholinergic and cardiotoxic side effects, they have been especially recommended for the treatment of elderly patients and of those suffering from heart disease. It should be noted, however, that clinical experience with these drugs is still rather limited compared to the tricyclic antidepressants. Moreover these drugs are not completely devoid of side effects: mianserin can produce headache, sedation and neutropenia [which is reversible on cessation of the drug]; maprotiline can cause convulsions; and trazodone can produce sedation, orthostatic hypotension, and impairment of male sexual functions (ejaculatory impotence, priapism).

Two compounds belonging to this group have been withdrawn because of severe adverse reactions: zimeldine for causing the Guillain-Barre Syndrome and more recently normifensine for causing haemolytic anaemia.

Monoamine oxidase inhibitors (MAOIs)* are an old established class of antidepressants which include phenelzine, tranylcyclamine and isocarboxizade. The antidepressant action of these drugs has been directly related to their main pharmacological action — the inhibition of the enzyme monoamine oxidase; enzyme inhibitors results in an increased concentration of cerebral monoamines which would correct the neurochemical deficiency underlying depressive illness.

MAOIs will interact with food substances containing tyramine and other catechol derivatives (for example dopa in broad beans, vanillin in chocolate) to produce hypertension. Foods implicated include cheese, yeast extracts, cream, broad beans, pickled fish, chocolate and alcohol. Similar reactions may occur with administration of over-the-counter preparations as cough and cold preparations containing sympathomimetic drugs.

The frequency and severity of adverse effects reported with the use of MAOIs (Table 2) and their potential for wide ranging adverse food and drug interactions (Table 3) are important factors in limiting the usefulness of these compounds. MAOIs

should only be prescribed by a psychiatrist and are used most now for tricyclic non-responsive or atypical depressions.

Recently a new MAOI called toloxatone (Humoryl) has been made available locally. Toloxatone differs from the old MAOIs in

that it is selective and does not interact with foods and drugs. It does not cause hypertension. However it should be noted that clinical experience with toloxatone is still rather limited and it is still too early to tell whether it will render the old MAOIs obsolete.

TABLE 3: DRUG INTERACTIONS WITH ANTIDEPRESSANTS

Drugs	Effects	Drugs	Effects
Tricyclics	increased plasm levels	MAOIs	hypertension
Antipsychotics	enhanced anticholinergic effects	Sympathomimetic amines	hypertension
	increased sedation	Phenyleprine	hypertension
anticholinergics	increased autonomic effects "atropinic" psychosis	Phenylpropanolamine	hypertension
Sedative hypnotics [barbiturates]	increase sedation decrease plasma levels	Levodopa	hypertension
Adrenergic blocking drugs	reduce effects	Tricyclic antidepressants	hypertension hyperpyrexia
Clonidine	reduce effects	Insulin	hypoglycaemia
		Pethidine	hyperpyrexia prolonged coma hypertension

EFFECTIVENESS AND CHOICE OF ANTIDEPRESSANTS

Antidepressants are most useful in moderate or severe cases of depression. They are less effective where the diagnosis is equivocal, where exogenous factors predominate, or where the main symptoms derive from a long-standing neurotic personality. Antidepressants however may be very effective where depression complicates organic brain disease, schizophrenia or alcoholism.

In severe depression with delusions antidepressants are effective too slowly to be generally satisfactory. Similarly where there is a real suicidal risk, the delay in therapeutic effect may be actually dangerous and electroconvulsive therapy (ECT) may be preferable. On the other hand, antidepressants may be very effective in some patients with obsessional, especially phobic, symptoms, or those who present with hypochondriasis, even at times in the absence of a manifestly depressed mood.

There is always uncertainty about the degree of effectiveness of a given antidepressant in a particular patient. Responses to antidepressants are determined, at least partially, by genetic factors; therefore any experience of these drugs by other members of the patient's family should be determined. For example, if a parent had a depressive illness and responded well to amitriptyline it is likely that the patient will respond well too. The outcome of any previous treatment of the patient with antidepressants should also be determined: if imipramine gave good effect previously it probably will do the same in the present episode of depressive illness.

The degree of agitation, anxiety and restlessness displayed by the patient will affect the choice of an antidepressant. Psychomotor retardation with flattened affect and anergia (and an absence of agitation) would prompt the choice of one with activating properties. Patients with obvious symptoms of anxiety will respond better to those known to have sedative properties (Table 4).

TABLE 4: CHOICE OF ANTIDEPRESSANTS

Properties	Drugs	Daily Dosage
Sedative	amitriptyline [Tryptanol]	75-150mg
Indicated in patients displaying restlessness and agitation	dothiepin [Prothiaden] doxepin [Quitaxon] trimipramine [Surmontil] mianserin [Bolvidon]	75-150mg 75-150mg 75-200mg 30- 90mg
Intermediate		
Little effect on motor activities, motivation or anxiety level	imipramine [Tofranil] maprotiline [Ludiomil]	75-200mg 75-150mg
Activating		
Indicated in patients with mainly anergia and flattened effect; agitation and anxiety can be increased	nortriptyline [Nortrilen] protriptyline* desipramine*	75-200mg

**These tricyclics are not available in Singapore*

STARTING TREATMENT

Drug treatment of depression requires an adequate dose for a sufficient time. The family physician tends to underprescribe the dosage and abandon treatment too soon. The initial dose (Table 4) should be increased to the mean therapeutic dose in 3 to 4 days. If the patient shows no improvement after 3 to 4 weeks there should be a gradual increase to the maximum dose. For example, if using amitriptyline the initial dose should be approximately 50-75 mg increasing to 100 mg in 3 to 4 days and gradually to 150 mg after 3 to 4 weeks if the patient fails to respond. This is provided the blood pressure is monitored [especially in the elderly] and there is no history of cardiac disease. In the elderly patient the dose required to produce therapeutic levels or response may be only half the normal adult dose.

MAINTENANCE TREATMENT

The treatment of depression comprises three phases: symptom remission, maintenance and prevention of a relapse. Because the average natural history of a depressive illness is 6 to 9 months, the chance of a depressive illness is high if medication is stopped too soon after remission of symptoms has occurred. Patients should be advised that they will need to remain on medication for 6 to 9 months. The maintenance dose required is usually one-half to two-thirds of the dose necessary to produce remission, and following success-

ful maintenance antidepressant drugs should be withdrawn slowly. If symptoms recur, the dose should be increased and withdrawal attempted after further treatment.

Maintenance treatment has an important contribution to make. Depression is an episodic illness and about 50% of patients will relapse. They will require long-term prophylaxis.

FAILURE OF TREATMENT

If the treatment fails, the family physician should consider the following factors:

- * Was the dose and duration of treatment adequate?
- * Did the patient take the drug as instructed?
- * If the patient could not tolerate the side effects, would a fresh start be worth considering, using the same drug but increasing the dose more gradually?
- * Would a trial with a different antidepressant be more appropriate?
- * Lack of side effects may suggest that the drug was being metabolised so rapidly that a therapeutic dose was not achieved. Plasma concentration estimations would be useful.
- * Does the patient have a physical condition hitherto undetected?
- * Is referral to a psychiatrist indicated?

INDICATIONS FOR REFERRAL TO PSYCHIATRIST

The majority of depressed patients can be treated as outpatients by the family physician; however some should be referred for psychiatric evaluation. Many of these patients can be referred back to their family physicians after two or three psychiatric appointments. Indications for psychiatric evaluation include:

- * those with bipolar depression
- * patients with psychotic depression
- * patients at risk for suicide
- * those with very severe depression
- * those with a history of treatment-resistant depression
- * patients who appear to be treatment failures after one to two months of appropriate treatment

CONCLUSION

This article deals with the drug treatment of depression but the management of any depressed patient must include attention to the psychological and environmental factors important in the aetiology or perpetuation of the illness.

REFERENCES

1. Goldberg D, Benjamin S, Creed F: Psychiatry in Medical Practice, 1987, London Tavistock.
2. Johnson G: Drug Treatment of depression, Medical Progress, December 1987.
3. Kerr K, Johnson G: Current Management of Depression, Australian Family Physician, April 1986. Vol 15 No. 4 Pg 500-502.
4. Patch ICL: Antidepressants, Postgraduate Doctor — Asia, February 1984.
5. Pougher J: Antidepressants: 1983 Australian Family Physician, October. Vol 12 No. 10 Pg 744-748.

MULTIPLE CHOICE QUESTIONS

- 1) In the case of a patient who unexpectedly becomes depressed, a drug reaction would be a likely explanation if he were taking
 - A methyl dopa
 - B prednisolone
 - C hydrallazine
 - D contraceptive pill
 - E metronidazole
- 2) Recognized features of depression include
 - A poor concentration
 - B delusions of bodily influence
 - C hypochondriasis
 - D fatigue
 - E agitation
- 3) Tricyclic antidepressants
 - A have a wide range of pharmacological properties including alpha-adrenoreceptor antagonist activity, anticholinergic effects and non-specific sedative effects
 - B have the advantage of safety in overdosage
 - C to be effective should be given three or four times daily at regular intervals
 - D they may be prescribed following acute myocardial infarction
 - E are of no value in preventing recurrent attacks of endogenous depression
- 4) The following information may reasonably be given to patients starting a course of tricyclic antidepressants
 - A they should expect the drug to take effect within two to three days
 - B they should avoid cheese
 - C they may experience a dry mouth initially
 - D duration of treatment is usually less than two months
 - E it may help them to lose weight

(continued on page 50)

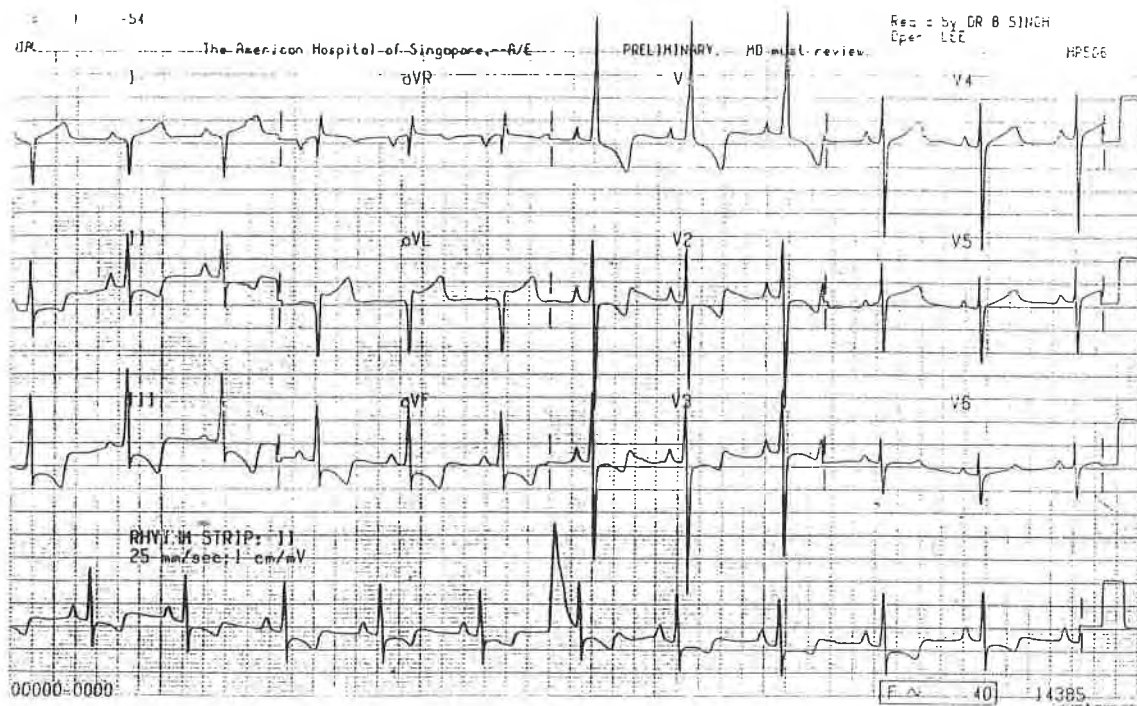
HOME STUDY SECTION

ECG QUIZ

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

This ECG belongs to a 30-year-old Malay male who had a syncopal attack while working on board a ship. Examination revealed a small statured man with a mid-systolic ejection murmur over the left sternal edge.

What are the ECG features and what is your diagnosis?



(Answer on page 48)

X-RAY QUIZ

Contributed by Dr K Param



Fig 1

Fig 1 shows a lateral view of the cervical spine of a female adult with a 20 year history of joint disease.

What abnormality can you see from this X-ray?

(Answer on page 49)

ANSWERS TO ECG QUIZ

The ECG shows right axis deviation, tall peaked P waves in II and V1, V2. Also downsloping ST depression is seen in the inferior leads and V1 to V3 with T inversion. Tall R waves are seen in V1 to V3.

This patient has right ventricle hypertrophy with "right ventricular strain."

Echocardiography confirmed the presence of a hypertrophied right ventricle. In this case it was due to congenital pulmonary stenosis.

ANSWERS TO X-RAY QUIZ



Fig 2



Fig 3

ANSWERS TO X-RAY QUIZ

Figure 1 shows atlanto-axial subluxation with widening of the space between the anterior arch of the atlas and odontoid process (normal distance ⁵ 1-3 mm). This is best seen in the enlarged view of Figure 2. This patient is suffering from rheumatoid arthritis.

Discussion

Rheumatoid Arthritis is an adult systemic connective tissue disorder characterised by symmetrical inflammatory poly-arthritis. It affects mainly the small joints with both soft tissue and bone destruction. Larger joints and the cervical spine may also be involved while the rest of the spine is usually spared.

In the cervical spine, the most common site of involvement is atlanto-axial joint where soft tissue laxity permits subluxation. Sometimes the transverse ligament may rupture with erosion of the odontoid process. Less commonly, the apophyseal joints and disc spaces may be involved with associated malalignment and bone destruction. Occasionally, the SI joints are involved, particularly in the most advanced cases.

Figure 3 shows typical changes of rheumatoid arthritis of the feet with articular erosion and cartilage loss. There is malalignment and valgus deviation of the toes of both sides. Similar changes occur in the hands with ulna deviation of the fingers.

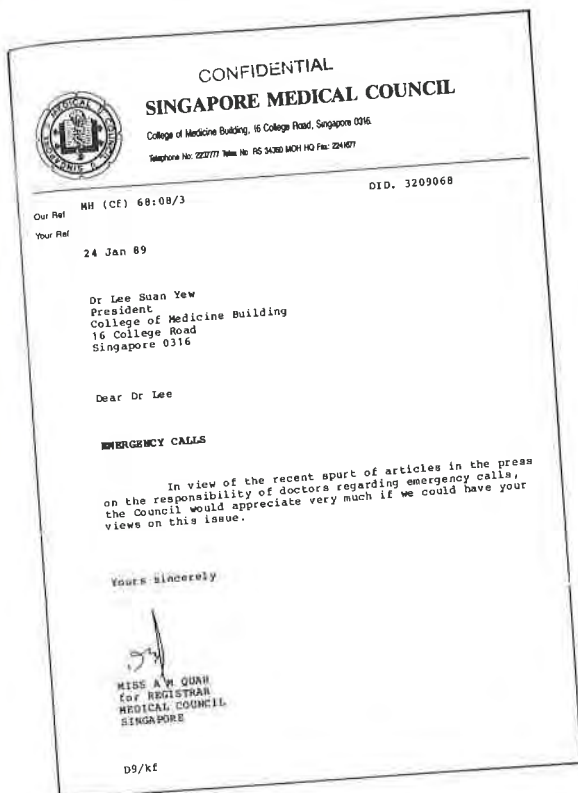
(Continued from Page 46)

- 5) Well recognised side effects of tricyclic antidepressants include
- A precipitation of glaucoma
 - B diarrhoea
 - C increase in peptic ulcer symptoms
 - D postural hypotension
 - E delayed orgasm
- 6) Mianserin
- A is a tricyclic antidepressant
 - B rarely causes drowsiness
 - C appears to be almost devoid of cardiotoxicity
 - D produces anticholinergic side effects as commonly as amitriptyline does
 - E may cause blood dyscrasia
- 7) The following statements regarding antidepressants are correct
- A they are not effective where depression is secondary to organic brain disease, schizophrenia or alcoholism
 - B a history of good response to a particular antidepressant indicates a patient will respond to it again in a relapse
 - C nortriptyline is the drug of choice in a highly anxious patient
 - D imipramine has little effect on motor activities, motivation or anxiety level
 - E patients on the MAOI toloxatone must observe strict dietary restrictions

ANSWERS

- 1 A B D E
 - 2 A C D E
 - 3 A
 - 4 C
 - 5 A D E
 - 6 C E
 - 7 B D
-

NEWS FROM THE COUNCIL



REPORT SUBMITTED TO THE SINGAPORE MEDICAL COUNCIL BY THE COUNCIL OF THE COLLEGE OF GENERAL PRACTITIONERS, SINGAPORE

EMERGENCY CALLS

PREAMBLE

The Council of the College of General Practitioners, Singapore recognises that there is no perfect system in meeting the need for emergency housecalls. How best this need could be met however, should be systematically reviewed.

The request for an emergency housecall is usually done in a mood of anxiety where there is perceived an element of urgency and danger to life if it is not attended to promptly. Any perceived reluctance or brushing off of the request by the doctor will be seen as being uncaring and this is the cause of the unhappiness in the housecall issue. Understanding and patience on the part of the doctor helps the patient cope with the situation.

A systems approach is taken in this paper to attempt a qualitative analysis of the problems associated with perceived emergency housecalls. On the basis of this analysis, several recommendations are made for action in the short and medium terms.

OBSERVATIONS ON PERCEIVED EMERGENCY CALLS

(1) Size of the problem

Newspaper complaints may represent the vocal minority or may indeed be symptomatic of a big problem. It is possible that the majority of patients who request for perceived emergency calls have their problems dealt with satisfactorily. These do not normally write to the press to thank their doctors. Thus, there is a case for a study on the size of the problem of unmet need for emergency calls through a systematic sampling survey.

(2) Manpower considerations

Presently, the problem of handling emergency calls is borne by general practitioners.

- (a) It is noted that doctors in polyclinics do not look after patients out-of-office hours. Considering that a quarter of the outpatient care is provided by the Government polyclinic, the unmet need, in absolute numbers may be big.
- (b) Many private specialists provide primary care yet do not provide after-hours service. These add to the number of patients with unmet needs.

(3) Doctor-patient-commitment

There is no registered list of patients in Singapore unlike in UK. Patients are free to see as many doctors as they like. Whilst this increases the choice of the doctor considerably, it also erodes the doctor-patient commitment. Patients may indeed view their doctors' services to be one of convenience rather than a relationship of mutual trust and confidence to be nurtured.

(4) **Patient-load**

The absence of a registered list means that the average doctor in Singapore has a large overlapping list of potential housecall patients. Unlike the UK list of 1800 to 2500 patients in a practice for a single handed GP in Singapore a single handed GP can have a "list" of 10000 patients. It is patently impossible for the single handed GP to attend to every call.

(5) **Long hours**

The Singapore practice is also characterised by the long hours the clinic is open. For the single handed GP, the remaining time for rest, recreation and relating to the family and friends is therefore limited. The provision of a out-of-hours care further reduces this available time. This difficulty may not be appreciated by the public and colleagues in the profession who are not single handed GPs. This however, is not to say that after office hours care should be ignored: the moral responsibility of ensuring that their patients have a defined channel for care remains; the use of a deputising mechanism is one option.

(6) **Real or Perceived Emergencies during office hours**

The demand for the doctor to leave his clinic and attend to a real or perceived emergency during office hours can be difficult to satisfy. The doctor should be given the freedom to balance the need of the patients waiting to see him and that outside the clinic. Many doctors have dealt with the problem by giving the patient the following options: (a) bring the patient to the clinic and be seen without delay; or (b) see another doctor nearby, or (c) go to the hospital.

(7) **Part of a system**

The housecall, the emergency unit in hospital and the ambulance service should be regarded as components of one system. Viewed this way, the exercise is how each component could contribute effectively to the whole system of providing the needed care efficiently, effectively and economically.

RECOMMENDATIONS

The short term

- (1) All health care providers of primary care are morally responsible for providing out-of-hours care for their patients, either directly or through some privately arranged deputising mechanism until such time that a deputising service can be set up.

In the private sector, this should apply to (a) general practitioners and (b) to private specialists who provide primary care. It is to be emphasised that private specialists who provide primary care *should* undertake to provide out-of-hours care for their patients. Those private specialists who see only referred cases will depend on the referral general practitioner to provide the out-of-hours care.

In the government sector, the provision of out-of-hours care for patients seen in the polyclinics, which is uncatered for at the moment, should be studied.

- (2) The concept of going straight to the accident & emergency unit in the case of difficult emergencies like severe injury, severe heart attacks and circulatory collapse should be widely disseminated since these problems cannot be dealt with satisfactorily in the outpatient context.

The health education pamphlet by the Training & Health Education Department of the Ministry of Health on how to recognise emergencies is a step in the right direction. Not only will the ability on the part of the patient to recognise emergencies help him in the effective use of the accident and emergency unit effectively, it will help him in deciding when to call the general practitioner.

Understandably, the lay person may not be able to distinguish between what is and what is not an emergency in some instances. The doctor should show understanding and patience.

- (3) The public perception of the doctor's inalienable duty to make a house-call on request should be examined and a Ministry's stand made.

It has to be noted that the doctor practising alone in the midst of a busy clinic has an equal duty to those patients awaiting his attention. This is a very real problem, and he will have to exercise his judgement as to where he is more urgently needed. The patient has to be clear on this concept.

The practical issue of a patient totally unknown to the doctor, especially in the middle of the night and to a strange address should also be examined. Considerations of personal security must be taken into account. Sufficient unpleasant incidents have happened in the past to make doctors take these considerations seriously. This issue reinforces the concept of the need for a family doctor.

- (4) A study should be made of the size of the problem of unmet need for emergency housecalls. This could perhaps be made by the Ministry of Health. The College, through its Research Committee will be pleased to collaborate if it can be of help. Such information will be useful to the public and the Government in the sort of actions that should be taken.
- (5) A good ambulance service is already available in the government sector. That in the private sector could be improved to support the private hospitals.

The medium term

- (1) The need for a deputising service, the feasibility and concepts related to its provision should be studied. The British model provides some idea of how it could be organised and run. Perhaps a task force could be set up to study the subject.
- (2) The Japanese model of out-of-hours and holiday provision of emergency primary care is another alternative to consider, either for patients in the government sector or for all patients. This could be studied by the same task force for the idea of a deputising service.

Submitted by

Dr Lee Suan Yew

President, College of General Practitioners, Singapore

on behalf of the Council of the College of General Practitioners, Singapore

THE SINGAPORE FAMILY PHYSICIAN

Guidelines For Authors

Authors are invited to submit material for publication in the Singapore Family Physician on the understanding that the work is original and that it has not been submitted or published elsewhere.

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- * Normally the text should not exceed 2000 words and the number of illustrations should not exceed eight.
- * Type throughout in upper and lower case, using double spacing, with three centimetre margins all round. Number every page on the upper right hand corner, beginning with the title page as 1. Make all necessary corrections before submitting the final typescript.
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- * Send three copies of all elements of the article: summary, text, references, tables and illustrations. The author should retain a personal copy.

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- * The summary should describe why the article was written and give the main argument or findings.
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Further reading

1. INTERNATIONAL COMMITTEE OF MEDICAL JOURNAL EDITORS. Uniform requirements for manuscripts submitted to biomedical journals. *Ann Intern Med* 1988; 108: 258-265.
2. Bailar III JC and Mosteller F. Guidelines for Statistical Reporting in Articles for Medical Journals. *Ann Intern Med* 1988; 108: 266-273.

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'NIF-TEN'

prescribing Notes

USE: Management of hypertension.

DOSAGE (adults only):
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CONTRAINDICATIONS:
Heart block, cardiogenic shock, overt heart failure, pregnancy and lactation, co-administration of cardio-depressant drugs (eg. verapamil), marked renal impairment.

PRECAUTIONS:
Poor cardiac reserve, conduction defects, anaesthesia. Caution in patients with chronic obstructive airways disease or asthma. Withdrawal of beta-blocking drugs should be gradual in patients with ischaemic heart disease. Withdrawal of clonidine. Co-administration with Class I antidysrhythmic agents. Interaction with cimetidine or quinidine.

Diabetes: Rarely, a transient increase in blood glucose has been observed with nifedipine in acute studies. Modification of the tachycardia of hypoglycaemia may occur.

SIDE EFFECTS:
Dizziness and bradycardia may occur. Headache, flushing, fatigue and oedema have been reported. Skin rashes and dry eyes have been reported with beta-blockers – consider discontinuance if they occur.

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'Nif-Ten' is a trademark.

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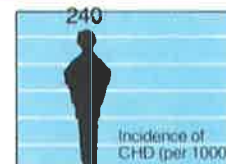
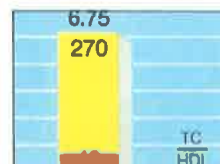
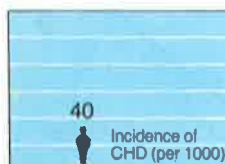
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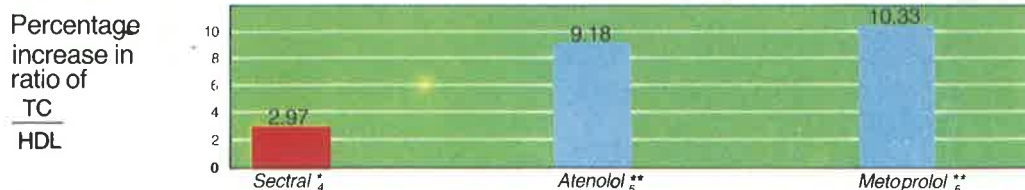
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References:

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

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Dosage: 400mg orally once daily at breakfast. If response inadequate after two weeks increase up to 800mg once daily at breakfast.
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