

# **The Singapore Family Physician**



**ISSN 0377-5305**

**The  
College of General  
Practitioners Singapore  
Vol. VII No. 4  
OCTOBER/DECEMBER 1981**



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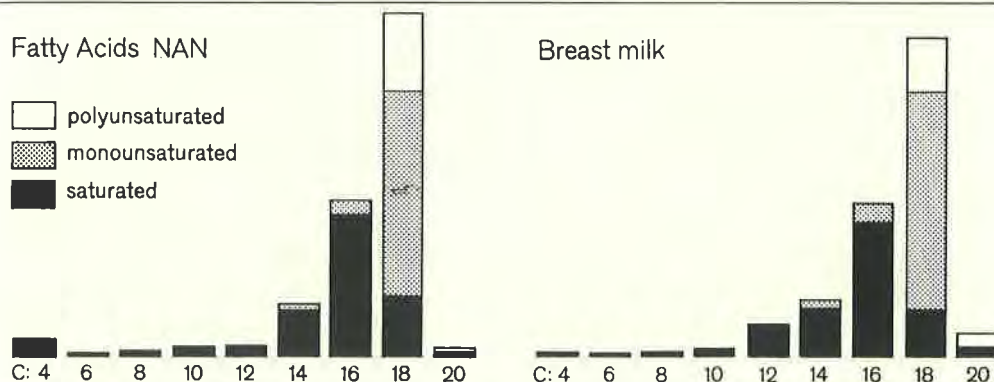
  
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## CONTENTS

	Page
The Eighth Council 1981-83 .....	91
Editorial .....	92
The President's Speech at the Seventh Convocation & Dinner and Fourth Sreenivasan Oration .....	95
A Survey of Post-Surgical Patients — Research Paper IV .....	97
The Scope of Transurethral Surgery .....	103
Assoc Prof Foo Keong Tatt	
Control of Venereal Diseases in Singapore. How can the G.P. help? .....	107
Dr Goh Chee Leok	
Gray Scale Ultrasonography .....	110
Dr Peter Lim Huat Chye and Dr P N Unni	
The Seventh College Convocation .....	113
News from the Council .....	114
Medical News .....	115

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## Editorial

### The Doctor:Population Ratio

Although quoted ad libitum with fervour amounting almost to faith, there are no magical qualities attached to the doctor:population ratio (d:p ratio). It is often imputed that a country with a high d:p ratio is one to be emulated because the people in it enjoy a better medical/health service. This has not been satisfactorily proven. For each country there is an optimal d:p ratio which must among other things take into account the level and degree of medical care it can afford or willing to give, dimensions of medical/health care other than that provided by the registered medical practitioners, the cultural norms and beliefs of the people and the amount of responsibility the people themselves are prepared and allowed to shoulder for their own medical needs.

A d:p ratio which keeps on soaring does not indicate an escalation of better and better medical/health care. On the contrary it may depict an increasingly dependent population with unfettered expectation. There may well be a steady erosion of the people's psycho-social equilibrium as well as a gradual ceding of their responsibility for their own well-being. These are reflected in a greater demand for doctors and their services.

The Statistics Department, Singapore has made releases covering many aspects of the population under the Census of Population 1980 reports. These cover demographic characteristics, literacy and education, economic characteristics, geographical distribution, households and houses, income and transport, languages spoken at home and the religions and fertility of Singaporeans.

The Census exercise has been a gigantic one and its importance incalculable. However, it is apparent that the resources of the exercise have not been tapped to evaluate some important medical facets of our population. Thus projection of Singapore's medical/health needs for the next two decades must have been based on perspectives of medical administrative convenience and experience confined to that segment of our population who

utilise only one dimension of medical care i.e. that offered by registered medical practitioners. Lamentably lost for the time being are the statistics of total medical needs which an exercise of the magnitude of the Census of population can provide.

A distinction must be made between medical needs and medical demands. A need is based on actual or basic requirement and is usually provided with no frills. There is no pampering to acquired or cultivated taste. A demand on the other hand is an imposition based on a supposed need. It arises from an unreasonable expectation or unjustifiable premise. Some medical demands may be created by the medical profession itself whilst others are imposed by the consumers of medical care. A d:p ratio makes no distinction between medical demands and needs. When a higher d:p ratio is offered as the promise of better things to come, we should be correctly sceptical.

The nature and needs of medical care have changed radically over the past decades. In the past medical care was concerned with acute infectious diseases and acute surgical conditions. These were cut and dry conditions and full restoration of function was expected in most patients. To-day we are faced increasingly with chronic illnesses such as cancer and degenerative conditions. **The change has been from illnesses requiring only single disciplines of medical care to illnesses requiring a multi-disciplinary approach. Such multi-disciplinary care is also likely to be spread over a protracted span of time.** The end result of treatment is seldom in sight and as long as full restoration of health or death is delayed medical care must be provided not by one doctor but by many doctors. Most degenerative diseases are also illnesses requiring a multi-disciplinary approach over a protracted span of time.

It has been reported that in the public sector 500 more specialists will be trained before the end of the decade in the fields of radiotherapy, radio-

logy, cardiovascular surgery, neurosurgery, ear/nose/throat surgery and anaesthesia. Most of these disciplines are geared to the realities of changes in the pattern of diseases as we see them now.

We can offer the statement that for any illness, the longer it takes to reach full restoration of function or death, the longer will the patient require medical care. Such medical care is likely to be provided by many doctors in different medical disciplines.

The change alone in the pattern of illnesses met with in present day practice is a factor that will influence the d:p ratio. What are the functions of other factors in influencing the d:p ratio? Some are obvious and others devious. Some elevate doctor-requirements and others have doctor-sparing effects.

There is little doubt now that most lung cancer deaths have been due to cigarette smoking. The Royal College of Physicians' report suggested that between 1951 and 1966 the proportion of U.K. doctors who smoked cigarettes fell from 43% to 21%. This simple and modest restraint had resulted in a yearly saving of 80 doctors (between ages 30 and 64) from death. David Smithers of the Institute of Cancer Research and Royal Marsden Hospital, London noted that this amounted to the annual output of doctors of one medical school — surely the cheapest medical school acquired. In the Singapore context, a determined restraint from cigarette smoking by doctors will not only prevent some from premature deaths caused by lung cancer but free them from the attendant morbidity risks of the lethal habit. From the point of view of the population any reduction in the number of cigarette smokers will reduce the number of patients who are likely to get lung cancer — an illness which requires the attention and care by many doctors over a protracted span of time. Thus kicking the smoking habit has doctor-sparing effects of more than a double fold.

Many patients are prepared to shoulder their own responsibility in common everyday illnesses but our bureaucratic way of life does not quite "permit" it. Having weathered repeated attacks of fever and colds, many patients are prepared and able to cope with these illnesses. Fluids, diaphoretics and rest are the mainstay of treatment. The first two self-prescribed courses of action will meet with no opposition or objection. Self prescription of rest however cannot be tolerated and is regarded as sacrilegious. Unless a valid sick-certificate signed and filled according to formal requirements is tendered, self prescription of rest is a punishable offence. Thus many patients are obliged to con-

sult registered medical practitioners in the public or private sector if they desire to have their third prescription filled. Done in the public sector such visits and medication supplied are subsidised. What about patients who consult practitioners of traditional medicine? How do they obtain certified rest except through registered medical practitioners? The question is are we prepared to allow patients to certify their own illnesses? Will it result in a doctor-sparing effect?

Another bureaucratic insistence which elevates doctor-requirements is that every pregnant mother must obtain a letter of referral to an obstetrician before she can have her confinement in a government hospital. Many pregnant mothers have no family physicians nor have they been patients of the government outdoor clinics. Pregnancy is self-diagnosed and very obvious. By insisting on letters of referral the system actually creates and perpetuates "middle-men" (a term used disparagingly by the Director of Medical Services, Singapore) out of general practitioners and medical officers of the government outdoor clinics. The need for letters of referral in certain hospitals should be dispensed with and requests for treatment should be accepted directly from patients. The venereal diseases hospital is certainly one and the maternity hospital should be another.

A wide range of other factors influence the d:p ratio. Some are immediately recognisable. Some are not so clearly evident. Some are even controversial. Individually they may not amount to much. Collectively and time accumulated their effects on the ratio are not inconsiderable.

Everything being equal, the medical needs of a bigger population are greater. With zero population growth the d:p ratio should remain fairly stable.

The longer a citizen lives, the longer will be his needs and demands for medical and health facilities. *"High cancer death rates are an indication of a good standard of living and reflect an effective community health programme"* (David Smithers).

The greater the degree of un-ease created by health propaganda, the more will people avail themselves of medical facilities. This is not to deny that health propaganda is useful. The message conveyed should be that the people themselves are responsible for many of their own ills and unless they learn to prevent them by adopting good and healthy life-styles they will end up consuming medical care for which they are expected to pay.

The greater the amount of subsidised health care provided, the more will they be utilised. They are so convenient. It is a question of the

patient's money competing for his time and which is determined the scarcer resource.

The greater the amount of medical facilities offered to the public, the more will these facilities be used. When sex-change operations are made available there is no dearth of patients. When termination of pregnancy is available more and more people seek these facilities. It has been subsidised to the extent that patients will rather suffer ignoble official formalities than pay for these services in the private sector from out of their pockets.

Specialisation in medicine tends to require more doctors to treat per unit population than medical care provided by general practice. Competent general practitioners minimise the need for additional specialists. Thus they depress the need for more doctors in the service of the country.

Unnecessary surgical treatments e.g. tonsillectomy and hysterectomy elevate doctor-requirements. Similary litigation worries tend to increase doctor-requirements because of over-investigations and interdisciplinary consultations to mitigate culpability.

Effective transport and industrial safety measures have a doctor-sparing effect.

Unhealthy life-styles create medical problems in

years to come and thus elevate doctor-requirements. The greatest benefit of health propaganda can be achieved here. Preventive measures require less manpower needs than curative medicine.

The doctor:population ratio is far more profound than it appears. Improving the d:p ratio is not the panacea for all ills. Neither is it the promise of better medical/health care. It is often quoted but seldom given the depth of meaning which is its due. It behoves every doctor to give some thought to its importance and ramification. The most important aspect of the doctor:population ratio is to decide whether it is created by demands or needs.

If the definition of the word "doctor" in the d:p ratio is widened to include those in traditional medical practices, then Singapore's d:p ratio, currently quoted as 1:1220, is way off reality. A more realistic ratio will be 1:610 on the basis that the number of traditional healers to the number of registered medical practitioners is in the ratio of 1:1. With this correction, Singapore's d:p ratio is most enviable by any standard. However the cry is we need more doctors. Expectancy certainly has no satiation point. We never know when enough is enough.

L.V.C.

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Views expressed in the Editorial are not necessarily the official views of the College.



## President's Address at the Seventh College Convocation and Fourth Sreenivasan Oration

Distinguished Guests, Ladies, My Colleagues and Friends,

On behalf of the College of General Practitioners Singapore, it is my pleasure and privilege to extend a warm-hearted welcome to all of you who have come here this evening.

Our College is ten years old and over the years, during the past decade, those of us who have been involved with the College have shared the same visions, aims and educational philosophies. We in the College in Singapore and those in similar colleges of general practitioners/family physicians throughout the world, are now absolutely certain that a college such as ours plays a vital role in the upkeep and continual revitalising of general practice/family medicine, serving as the instigator and the co-ordinator of new and improved training programmes, the setting and assessing of improved standards and the promotion of general practice/family medicine as a new and vital discipline — thereby giving an academic standing to general practice/family medicine that it once lacked and improving the status and well-being of the family physician.

Since its foundation the College has come a long way, but it has not been an easy road. Progress which has been made has been the direct result of a tremendous amount of hard work and time given by those who are dedicated to general practice and the ideals for which the College stands. We can today reflect on some of the significant milestones that we have achieved in the educational and assessment fields — our continuing education programme for the practising doctor have encouraged greater participation by our members, our problem-orientated diplomate examination in family medicine has been recognised as an additional registrable qualification by the Singapore Medical Council, and our self-assessment home-study and audio-visual programmes are but some of the outstanding areas of progress. But the past has not all been success. It has not been easy for the College to obtain recognition

as a significant academic medical organisation and our motives have been frequently misunderstood or misrepresented. But what has been done was part of the maturing process and in a sense, a preparation for the years that lie ahead. The College can therefore look back on the past with some pride in its achievements.

What of the future? As we enter a new decade the College must be seen as a dynamic body exercising professional leadership and pursuing vigorously its education objectives. Our explicit commitment is to raise and maintain standards of general practice, with particular regard for the undergraduate curriculum, immediate post-graduate training for general practice/family medicine and appropriate provision for ongoing continued medical education. The College believes that those entering primary care services either in private practice or the government outpatients services should be competent and cost effective, and the College has come up with data to prove that the trained family physician uses costly resources less than his untrained counterpart — by making fewer referrals to specialists and hospitals, and by the reduced use of expensive investigations and drugs.

The total cost of our health services is escalating by leaps and bounds. Our Minister of Health at a recent press conference stated that the government expects the cost of medical services to rise to \$826 million in 1990 from \$217 million last year. On the other hand, the corresponding revenue will go up by only \$80 million — from \$50 million last year to \$130 million in 1990. These projections are causing great concern to our health planners as the burden is more than the government or our community could bear. There is therefore a compelling need for innovative cost effective approaches and methods to cope with the vast extent of current health needs aggravated by escalating costs, especially of treatment-orientated hospital care. The government therefore now encourages the private sector to take

over treatment of patients to a greater extent, specially at the ambulatory level, and envisages a "user pays" system, with public subsidy for health care reserved only for the deserving few. This would result in an increased flow of patients to doctors in the private sector, both generalists and specialists, and reduce the load on the government health services.

This means that the role and scope of general practice should be redefined and primary medical care should be reorganised to facilitate the delivery of comprehensive health care. It is imperative that there should be special training for the graduate entering primary care services, be it in the public or private sector; as well as the development of a proper career structure for the general practitioner of the future.

The time has therefore come for our medical school to meet the needs of the community and recognise the importance of enhanced primary medical care. Being the most cost-effective, the medical curriculae and teaching programmes should be redirected to enable the student to learn about the enhanced primary care doctor's special attitudes and skills and be taught in the content of the family physician as he applies his discipline in patient care.

Any such curriculum must teach a set of skills — intellectual and practical — that are specific to the clinical function of the generalist and family physician. Defining these skills more precisely, illustrating their uses and demonstrating them clinically in the domain of the family are the special educational assignments of a Department of Family Medicine.

The ideal undergraduate curriculum in family medicine offers didactic and experimental teaching throughout all the years of Medical School as an integral part of the medical students' experience. Such a curriculum requires co-ordinated planning and implementation in order to build in progressive levels of responsibility for patient care by medical students and to prepare interested graduates for more definitive training in Family Medicine at the immediate postgraduate level.

There is also a need for special training of the graduate entering primary health care services. Many graduates still move straight from their hospital training to solo general practice without adequate training for general practitioners who come straight from hospital employment, without

an adequate period of supervised general practice, is likely to be inferior.

In the long term the community would benefit from a better quality as well as cost-effective service, if supervised training were available for all entrants to general practice. The College is willing, but is unable to undertake this vocational training without public funding. The lack of government support for general practice training in our Republic when compared with other developed countries, demonstrates that this lesson is yet to be learned.

Ladies and gentlemen, tonight we are admitting four members of our College to the Diplomate membership. I extend to them my warmest congratulations and look forward to their greater involvement in the College educational programmes.

The Albert Lim Award, designed to honour the memory of the late Dr Albert Lim, a very distinguished family physician, goes to Dr Feng Pao Hsii. He is being awarded for his untiring efforts and contribution to the clinical training programmes for candidates in our Diplomate Examination over the years. Certificates of appreciation go to Drs Arthur Lim Siew Ming and Loong Si Chin for their outstanding services to the College.

The highlights of this evening's proceeding is the Fourth Sreenivasan Oration. This Oration is presented on an annual basis and is designed to honour both our Founder President, the late Dr B R Sreenivasan and the recipient invited to deliver the Oration. I am glad to announce that the proud recipient of the Fourth Sreenivasan Oration is Dr Frederick Samuel — a Fellow of our College — and currently the Vice President and the Chairman of the Continuing Education Unit of the College of General Practitioners Singapore.

May I conclude by thanking all our distinguished guests, friends and members for being with us this evening. By your coming and by your presence here this evening, you have given us a great deal of encouragement to face the challenges that lie ahead. To our donors, teachers, examiners and the many, many others who have helped us during the past decade, on behalf of the College of General Practitioners Singapore, I thank you most sincerely.

Finally, I would like to thank Dr Tan Tian Cho and his Committee for the splendid organisation of tonight's function.

# A Survey of Post-Surgical Patients

**Dr. Leong Vie Chung**, MBBS, FCGPS

**Dr. F. Samuel**, MBBS, FCGPS

**Dr. V. P. Nair**, MRCPE, MRCPG, MRCP

**Dr. Evelyn Hanam**, FRCPE, FCGPS

**Dr. Chong Tong Mun**, MBBS (Malaya), MD (S'pore).

## SYNOPSIS

A total of 861 patients with past histories of 940 surgical operations were surveyed. The survey was done by 33 general practitioners (APPENDIX I), members of the College of General Practitioners, Singapore over a period of one year from 1st January 1980 to 31st December 1980.

## OBJECT

The object of the survey was to find out how much relevant and meaningful information of his/her surgical experience a patient could recall taking into consideration the following factors:-

1. the recency of his/her operation,
2. the site of the operation,
3. his/her educational status and
4. the amount of information given him/her pre-operatively and post-operatively.

## PATIENT DATA

### a) Patients' Ages

The cohort of patients surveyed was made up of the following age groups (Table 1: Age Composition):-

0 - 9 years	:	35	( 4.07%)
10 - 19 years	:	33	( 3.83%)
20 - 29 years	:	160	(18.58%)
30 - 39 years	:	139	(16.14%)
40 - 49 years	:	147	(17.07%)
50 - 59 years	:	146	(16.96%)
60 - 69 years	:	143	(16.61%)
70 - 79 years	:	45	( 5.23%)
80 & over yrs.	:	10	( 1.16%)
Age not stated	:	3	( 0.35%)

### b) Sex Ratio

In our cohort of patients, the Female:Male ratio was 478:382 or 55.5%:44.5%. The census of population 1980 reported a Female:Male ratio of 1,182,185:1,231,760 or 49%:51% of Singapore. Thus in our patients, there were more females than males who had surgical operations.

### c) Ethnic Composition

The ethnic composition of our patients was compared with that of our population in Table 2: Comparative Ethnic Composition.

Table 2: Comparative Ethnic Composition				
Our Patients			Census of Population 1980	
	Number	%	Number	%
Chinese	755	87.7	1,856,237	76.9
Malays	45	5.2	351,508	14.6
Indians	50	5.8	154,632	6.4
Others	11	1.3	51,568	2.1
	861	100.0	2,413,945	100.0

The above table reveals that there were proportionately **more Chinese** and **less Malay** patients in our cohort who had surgical operations than could be accounted for by the ethnic composition of our population. These observations are however not unexpected. Generally, there is a greater willingness of Chinese patients against a greater reluctance of Malay patients to submit to surgical operations.

### d) Surgical Experiences

There were 14 traumatic cases (accidents encountered at home, at the worksite/office, on the roads, during sport or as a result of personal assault) against 924 non-traumatic cases (those



having a pathological basis or those seeking surgery for specific purposes such as termination of pregnancy, ligation of fallopian tubes or sex change).

### REGENCY OF OPERATIONS

Of the 940 operations, 142 were performed less than one year ago at the time of the interview, 438 were done between 1 to 5 years ago, 155 between 6 to 10 years ago, 193 over 10 years ago and in 12 operations no records were made (Table 3).

**Table 3: Recency of Operations**

Operations	No.	%
Less than 1 yr. ago:	142	15.1
1 yr. to 5 yrs. ago:	438	46.6
6 yrs. to 10 yrs. ago:	155	16.5
Over 10 yrs. ago:	193	20.5
Dates not stated:	12	1.3

Of the operations performed less than one year ago, 136 out of 142 were remembered in greater detail than those done over a longer period of time (APPENDIX II). Thus recency of surgical operation is a factor in favour of recall. However in most cases, the pathological basis of the operations could not be stated except the most simple and obvious.

### SITES OF OPERATION

Eye operations for cataract extraction, thyroid operations, lumps in the neck or breast for biopsy, operations on the spine for slipped disc or backache, Caesarian section for difficult labour, abortions and ligations, cholecystectomy, appendicectomy, herniorrhaphy, piles operation and circumcision were given with greater certainty than other operations of the abdomen or thorax. Surgical scars over the abdomen or thorax tax the ingenuity of the general practitioner more than other surgical scars over the rest of the body. Thus the site of operation is a factor which favours recall. However, the pathological basis behind most scars whether in the abdomen, thorax or other sites remains poorly understood by the majority of patients.

### EDUCATIONAL STATUS

The overall number of patients who knew what operations they had numbered 437 against 424 (51% against 49%) who did not know.

Of the 861 patients surveyed, 260 received no formal education, 328 had only primary education, 242 had secondary education and the remain-

ing 31 patients had tertiary education (See Table 4: Educational Status)

**Table 4: Educational Status**

No Formal Education:	260 (30.2%)
Primary Education:	328 (38.1%)
Secondary Education:	242 (28.1%)
Tertiary Education:	31 ( 3.6%)

In the group of patients who had tertiary education, 23 (74%) knew what operations they had. Only 8 (26%) in this group did not know what operations they had.

159 (66%) patients out of 242 patients who had secondary education knew what operations they had against 83 (34%) who did not know.

In patients with primary education or no formal education, the number of patients who did not know what operations they had outnumbered those who knew. In the primary education group 143 (44%) patients knew against 185 (56%) who did not know. In the no formal education group, 112 (43%) patients knew against 148 (57%) who did not know what operations they had (Table 5).

**Table 5: Awareness of Nature of Operation**

Patients	Aware	Not Aware
No Formal Education	112 (43%)	148 (57%)
Primary Education	143 (44%)	185 (56%)
Secondary Education	159 (66%)	83 (34%)
Tertiary Education	23 (74%)	8 (26%)
Total:	437 (51%)	424 (49%)

Our findings confirm that educational status has an important bearing on a patient's ability to give a relevant and meaningful account of his surgical experience.

### PRE-OPERATIVE INFORMATION

Our survey (Table 6) revealed that 699 (74.4%) of all operations (940) were preceded by pre-operative information given to patients. 241 (25.6%) operations however were not preceded by pre-operative information.

**Table 6: Pre-operative Information**

Operations with pre-operative information:	699 (74.4%)
Operations without pre-operative information:	241 (25.6%)

Our findings revealed that more operations were preceded by pre-operative information than those without. This reflected a healthy change in attitude. In the preceding two decades, it was common knowledge that a patient's consent for operation was **not exactly** "informed consent". The most junior nurse was often given the most important duty of obtaining a patient's consent for operation. It was not unusual for a patient to thumb-print or sign a consent form for operation (usually printed in English) even before the surgeon had the opportunity to talk to him. This was the acme of nursing efficiency in a bygone period. That was the system and everyone played by it. Many patients still bore the scars of ignorance of that period.

In the wake of self-government and as the citizens become better educated and sensitive of their rights, we may yet see the day when a patient will want to know not only the mortality risk of a particular operation but will insist to know the mortality risk associated with the surgeon offering that particular operation. The enlightened surgeon of the future should not feel insulted with such discriminating evaluation by the patient. With rising affluence there is a rising expectation of excellence. The ultimate choice of all knowledgeable and affluent patients is surgical excellence at minimal risk.

#### OUTLINE OF OPERATION

Out of the total of 940 operations, 259 (27.5%) received some sort of information relating to the outline of surgical treatment. 663 (70.5%) of these operations were done without the patient knowing anything of the outline of surgical treatment. In the remaining 18 operations no record was made by the interviewing general practitioners.

**Table 7: Outline of Surgery**

Given:	259 (27.5%)
Not Given:	663 (70.5%)
Not Recorded:	18 (02.0%)

Our findings suggested that the outline of surgery was not normally discussed with the patient. The majority of patients were prepared for operation without knowing what was in store for them.

We believe that time taken by the surgeon to explain the outline of the intended operation to the patient will pay off well during the convalescent phase of the treatment.

#### POST-OPERATIVE INFORMATION

598 (63.6%) of the 940 operations were performed without providing information to patients post-operatively. In only 332 (35.4%) operations were patients informed of the outcome of their operations. See Table 8.

**Table 8: Post-operative Information**

Information provided:	332 (35.4%)
Information not given:	598 (63.6%)
Information not recorded:	10 (01.0%)

An intended operation may differ from the actual operation done and it is perhaps only right and proper that a patient be told postoperatively that his operation has been according to plan or has differed from the intended operation. Such postoperative information is necessary to preclude possible litigation on grounds of incomplete informed consent. Our findings indicate that there is certainly room for improvement in this communication gap.

#### HOSPITALS AND HOSPITALISATION

Out of a total of 940 operations 926 (98.5%) of them were stated to have been conducted at specific hospitals or clinics; very little difficulty was encountered by patients in remembering these places. Only in 4 cases (0.4%) were there uncertainty over the hospitals or clinics where the operations were performed. In 10 instances (1.1%) the names of the hospitals or clinics were not recorded.

Again the length of hospitalisation in each of the operations was stated with certainty. 914 hospitalisations out of 940 (97.2%) were remembered; in only 26 instances (2.8%) were the length of hospitalisation uncertain.

It would appear that the patients surveyed had no difficulty remembering the hospitals or clinics where they had their operations and the length of hospitalisation in each case.

#### DATES OF OPERATION

493 of the 940 operations (52.4%) were remembered right back to the exact year and month. There was uncertainty over 433 operations (46.1%) but they were nevertheless given to the nearest year. The dates of 14 operations were not recorded.

Operations are important events in the lives of patients and the dates of operation are normally not easily forgotten.



## CERTIFICATES OF SURGERY

Documentary evidence of surgery was seldom given to the patient who had surgical treatment. In our findings, only 11.8% of operations were provided with some form of documentary evidence. This was mainly certificates of ligation requested by mothers to enable their children to obtain priority in school admission and letters or notes to government outpatient clinics for follow-up. The issuance of a certificate of surgery solely in the interest of the patient was an uncommon finding (Table 9: Documentary Evidence).

**Table 9: Documentary Evidence**

Document provided:	111 (11.8%)
Document not provided:	829 (88.2%)

It is heartening to note that a few surgeons in the private and public sectors are providing their patients with documentary evidence of surgical treatment. We hope that all surgeons should make it a matter of course to issue documentary evidence of surgical treatment to every patient particularly for continuing medical care. We believe this is in the best interest of the patient. The format of documentary evidence should enjoy some degree of standardisation. At the moment, one or two surgeons provide colour photographs of the organ or tissue removed from their patients. A few proffer pathological reports. On the basis of our findings, we favour the provision of documentary evidence to every patient who has undergone surgical treatment. A letter to the referring doctor is well and good but it is no substitute for providing the patient with a standardised format of the operation and the pathological basis which necessitated it.

## ANATOMICAL KNOWLEDGE

Scant knowledge of human anatomy is found even in patients with tertiary education. The average patient knows very little about his own body — the anatomical and physiological aspects. Biology as a school subject is taught in secondary three classes and the number of students taking this averages three to four classes of 40 to 45 students each in the better established schools. Most students come out of school with no acquaintance with biology and even less with human anatomy.

## AWARENESS OF OPERATIONS DONE

A patient's awareness of surgical procedures done on him cannot be totally believed. In our

survey of 940 surgical operations, 51% of these operations were said to have been understood. But this understanding is not unqualified. He knows that the surgical operation performed is to relieve him of an obstruction, to stop bleeding, to relieve pain, to relieve abnormal symptoms or to achieve a specific and desired effect. In most instances he does not know the pathological significance or basis underlying the surgical operation.

## THE LEGAL ASPECTS

Who has legal title to a removed diseased part of the patient? The patient or the surgeon? If the patient has legal title then his consent for disposal must be sought. It means a diseased part of his anatomy although removed remains his property until he decides what is to be done with it. The need to obtain consent from the next of kin to remove cadaverous parts of the body seems to support the patient's right of title rather than the surgeon's.

The legal right of the patient to know exactly what organ or tissue the surgeon has removed from him appears to receive scant attention from the medical profession. It has always been assumed that a surgeon will inform his patient which part of his innards has been removed surgically. Verbal information is poorly understood, easily forgotten and often misconstrued. The removal of an organ or tissue is sufficiently important to merit a written statement from the surgeon who has performed the operation. Short of another operation nobody can tell with certainty what has been surgically excised.

## CASE HISTORIES

The following case histories amplify more fully some of the points brought up in the discussion.

- 1) C.L.E., a 17 year old Chinese seamstress with secondary education fell into a monsoon drain and was sent to a government hospital by a G.P. who suspected a ruptured spleen. Eight years later when seen by the same G.P. she was totally unaware that a splenectomy was performed on her. She could remember her admission into hospital, the length of hospitalisation and the circumstances attending her admission but could not say what organ had been removed from her. This case illustrates that any interpretation given to a mid-line epigastric surgical scar can be fraught with difficulty.
- 2) L.S., a 65 year old Chinese butcher with secondary education was admitted into a government



hospital because of inability to pass urine. He was operated on after having been told that the operation would relieve his retention. In relating his surgical experience which was only six months ago at the time of the interview, he was unaware of what tissue or organ had been removed from him.

3) S.N.M., a 60 year old Chinese female domestic servant with no formal educational was referred to a hospital by a G.P. with the diagnosis of carcinoma of the colon. A hemicolectomy was performed. When seen five years later she was unaware that the operation she had was for carcinoma of the colon. She gave a history of having had her appendix removed. Any doctor other than the one who sent her into hospital for carcinoma of the colon would have taken her word that her appendix was removed five years ago.

4) P.L., a 23 year old Chinese female clerical assistant with secondary education showed a mid-line suprapubic surgical scar. She had her operation in June 1978 at a government hospital where she was warded for 30 days. She claimed that "her uterus and both her ovaries" were removed surgically but could not say why. She offered no documentary evidence to support her history. It is hazardous to guess what the pathological basis was which necessitated the removal of her uterus and both ovaries at the tender age of 21 years.

5) T.G.L., a 38 year old Chinese housewife with primary education exhibited a suprapubic midline surgical scar. She was operated on 3½ years ago at a government hospital where her "womb was removed because of disease". Again the pathological basis of the hysterectomy could not be ascertained in the absence of documentary evidence provided by the surgeon.

6) C.K.K., a 63 year old Chinese salesman with primary education showed a transverse surgical scar over the back of the right lower thoracic cage. The operation was done on 15th October 1973 at a government hospital where he was hospitalised for 12 days. He received both pre-operative and postoperative information relating to his operation. When he left hospital he was given a card denoting that a "right nephrectomy for hydronephrosis" was performed. This information given is in the best interest of the patient. Wherever he goes, the evidence goes with him. The surgical scar becomes meaningful as it should be and not a guessing game as it should never be.

## SUMMARY AND RECOMMENDATIONS

In so far as the dates of operation, the hospitals or clinics where the operations were done and the length of hospitalisation are concerned, patients have no difficulty in recall. These are peripheral to the more important core aspect of a surgical experience, that is, of knowing what organ or tissue has been removed and the pathological basis of the removal. Our survey indicates that 49% of patients remained ignorant of their surgical experiences. Only 51% were able to give relevant and meaningful account of their surgical experiences.

Our survey further reveals that the ability of a patient to provide relevant and meaningful information of his/her surgical experience depends on the recency of his/her operation, his/her educational status, the site of the operation and the amount of information given him/her preoperatively and postoperatively. However it is not always possible to ensure that all such favourable factors are operative in every surgical patient. The only way to ensure that a surgical patient can give a relevant and meaningful account of his/her surgical experience is the simple device of providing him/her with a letter, card or note succinctly stating the operation and the pathological basis of the operation.

Much has been done by the Ministry of Health to acquaint patients of the medications prescribed for them. The next logical step and the far more important one is to ensure that the organ or tissue removed from a patient during surgical treatment is made known to him/her in the form of a certificate. If for any good reason the nature of the operation or its pathological basis cannot be revealed to the patient, his next of kin should receive the written information.

A few surgeons are already providing their patients with certificates indicating the nature of operation and some the pathological basis of surgery. We strongly urge all our surgical colleagues to give serious consideration to the need to provide each of their patients with a certificate stating the nature of the operation done and the pathological basis which necessitated it. This is an instance when a thousand words by the patient cannot match a few written choice words of the surgeon. It is hoped that all surgical patients will bear in the future "scars of knowledge" rather than "scars of ignorance".

## APPENDIX I

All answers to a standard questionnaire were recorded from patients directly except children and handicapped persons whose histories of surgical treatment were given by their parents, relatives or guardians.

Members of the College of General Practitioners, Singapore who participated in the survey:-

Dr. Paul Chan/Dr. (Mrs.) P. Chan,  
Dr. James Chang/Dr. Chang Li Lian,  
Dr. Chee Chin Tiong,  
Dr. Chia Sze Foong,  
Dr. Chin Keng Huat, Richard,  
Dr. Gabriel Chiong,  
Dr. Chong Kim Foo/Dr. Tay Soi Kheng,  
Dr. Chong Tong Mun,  
Dr. V.L. Fernandez,  
Dr. Goh King Hua,  
Dr. Evelyn Hanam,  
Dr. Hia Kwee Yang/Dr. Low Yee Shih,  
Dr. Lee Suan Yew,  
Dr. Leong Vie Chung,  
Dr. Lim Chan Yong/Dr. Ho Gien Chiew,  
Dr. Lim Kim Leong,  
Dr. Alfred Loh,  
Dr. Ng Keck Sim,  
Dr. Ng Kok Teow,  
Dr. Soh Cheow Beng,  
Dr. Tan Cheng Bock, Adrian,  
Dr. Tan Kai Eng,  
Dr. Tan Keng Wah, Jerry,  
Dr. Tan Suan Ek,  
Dr. Wee Sip Leong, Victor,  
Dr. Wong Heck Sing,  
Dr. Yeo Peng Hock, Henry, &  
Dr. Yeo Siam Yam.

## APPENDIX II

Sites of operation given by 136 patients out of 142 whose operations were done within a year of the interview.

Female genital tract	40
Appendix	12
Stomach	10
Gall-bladder	9
Kidneys	8
Spine	8
Eye	8
Hernia	6
Breast	5
Thyroid	4
Prepuce	4
Tonsils	4
Prostate	3
Umbilicus	2
Heart	2
Oesophagus	2
Neck Glands	2
Large Intestine	1
Ear	1
Lung	1
Intestine (intussusception)	1
Piles	1
Varicocele	1
Lower limb (amputation)	1

## ACKNOWLEDGEMENT

We would like to thank the President and Council of the College of General Practitioners for the encouragement given and our colleagues for participating in the survey. To our patients who have given us their time and co-operation in filling the questionnaires we express our sincere thanks.

# The Scope of Transurethral Surgery

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## INTRODUCTION

Transurethral surgery had been practised since antiquity; however, only in the past few decades has it gained popularity, first in the United States in the 1940s, in the United Kingdom in the 1960s and in Singapore in the past 10 years. This is mainly due to the improvement of optical lens system, fibre-optic light source and better diathermy machine. More and more lesions of the lower urinary tract can now be treated transurethally.

## ADVANTAGES OF TRANSURETHRAL SURGERY

The advantages of transurethral surgery compared to conventional "open" surgery are many. The main one being lack of postoperative pain which all patients will appreciate as there is no surgical incision. There is less surgical trauma and even the fairly ill patient can tolerate the procedure quite well. Blood loss is less and postoperative recovery is rapid. The majority of patients after transurethral surgery can be discharged within 5 days postoperatively, whereas patients undergoing "open" surgery required twice the time to recuperate. In general, the morbidity and mortality of transurethral surgery is much lower.

The main disadvantage is that the technique is difficult to learn and it requires a long period of apprenticeship to do the operation well. Badly done, disasters can occur.

## TRANSURETHRAL RESECTION OF PROSTATE (TURP)

This is the commonest transurethral surgical procedure and is done for benign as well as malignant lesions of the prostate.

Benign hyperplasia of the prostate is the commonest cause of acute retention of urine in man above the age of 50 years. About 70% of our patients presented as such, only half of them had

previous symptoms of bladder outlet obstruction mainly that of hesitancy and poor urinary stream. About 25% presented with symptoms of bladder outlet obstruction without retention of urine while a small percentage (about 4%) presented with painless gross haematuria due to bleeding from prostatic veins. 1 to 2% presented with uraemia due to chronic retention of urine.

The average size of the prostatic adenoma in our local population is relatively smaller than in Western countries, only about 10% being larger than 40 Gm and therefore almost 95% of our patients are suitable for transurethral surgery.

In general, it is not advisable to resect a large prostate transurethally because of prolonged resection time and the danger of water intoxication due to absorption of water used for irrigation during resection. One should try to limit the resection time to 60 minutes and at the most it can be extended to 90 minutes. With experience larger and larger prostatic adenoma can be resected safely within this time constraint. In our University Department of Surgery, open prostatectomy is seldom carried out now except for the large prostate associated with a large vesical stone.

There is still the misconception that in transurethral surgery, removal of the prostatic adenoma is necessarily incomplete and therefore the result is not as good as open prostatectomy and that recurrence of obstruction is common. This may be true decades ago when transurethral resection is limited to the small fibrous prostate and prostatic carcinoma where a "channel" is resected to enable the patient to pass urine. A properly done transurethral resection of the prostate removes completely the prostatic adenoma down to the false capsule as in any open prostatectomy. The incidence of recurrence of obstruction is no higher than that of open prostatectomy, being about 1 to 2%.

In the postoperative period, the patient is put on continuous bladder irrigation with normal sa-



line via a 3 way irrigating Foley's catheter. This is to prevent postoperative clot retention which is the commonest postoperative complication. The rate of irrigation is regulated according to the degree of blood staining of the bladder outflow. The patient will complain of suprapubic pain or discomfort if clot retention occurs and the bladder will be palpable. If this occurs, immediate manual washout of the bladder should be done and if bleeding is excessive, it is advisable to return the patient to the operating theatre for washout under vision and to diathermise the bleeding points.

The other serious complications to look out for in the immediate postoperative period is water intoxication and septicaemia. In water intoxication, there is vomiting and clouding of consciousness and in severe cases, fits can occur. There is hyponatraemia with serum sodium usually below 120 mEq/L and haemolysis may occur. Treatment is with hypertonic saline (3%) and diuretics such as frusemide or mannitol. Fortunately this complication is rare if one limits the resection time to 60 minutes and at the most 90 minutes and one does not resect too deeply into the prostatic capsule opening up the venous plexus for absorption of the irrigating water.

Septicaemia, with fever and rigor and in severe cases, with the patient going into shock can occur but is uncommon provided one refrains from doing transurethral surgery in the presence of active urinary tract infection.

As a routine, continuous bladder irrigation is carried out until the 3rd postoperative day even though the bleeding has stopped, usually after 24 hours. This is done to reduce the incidence of postoperative infection which is in the region of 20%. Antibiotics are also used postoperatively as a routine and the common ones used are nitrofurantoin, nalidixic acids and Bactrim, the organisms commonly found being *Klesiella* and *pseudomonas*. Gentamycin is indicated for the severe infection.

The catheter is removed on the 4th postoperative day and usually the patient will be able to pass urine with good stream and good control though sometimes they may have some dysuria and urgency. This will usually improve in two to three weeks.

In about 5% of patients, there may be poor urinary control, varying from stress incontinence to a continuous dribble. This is one of the dreaded complications; fortunately, the majority will recover within 2 to 3 months leaving the unfortunate 1% who will continue to be troubled. At present, there is little one can do except to provide them with an incontinence bag.

In another 6% of patients, they may be unable to pass urine again after the removal of the catheter. Recatheterisation should be done. The postoperative retention may be due to atonic bladder or due to remnant prostatic adenoma. A further period of catheterisation will allow some of these bladders to regain their tone. If the patient is still unable to void after recatheterisation for 5 days, then cystourethroscopy is done and if remnant prostatic adenoma is found, this is resected. If no mechanical obstruction is found, a cholinergic drug such as carbacol is given and the bladder tone will return with a further period of catheterisation.

On discharge, the patient is advised to have a high fluid intake and warned about the possibility of secondary haemorrhage within about 2 to 3 weeks postoperatively (7%). If bleeding is severe, the patient has to be readmitted and put on continuous bladder washout and appropriate antibiotics. Those with repeated clot retention would require cystourethroscopy and evacuation of clots under vision and to coagulate the bleeding points often arising from infected remnant prostatic adenoma which needs to be resected.

2 to 3 months postoperatively, urethral stricture may occur and this is manifested by poor urinary stream again or persistent urinary tract infection. The patient should be recystourethroscopied and urethral dilatation is done if stricture is found. Usually two or three dilatations would be sufficient to relieve the patient. Sometimes the obstruction is due to contracture of the bladder neck and this has to be resected. Because of the possibility of this complication, the patient is usually followed up for at least six months.

The mortality rate is about 1% and the deaths are due to associated medical conditions like ischaemic heart disease. There were 3 deaths in the last 300 cases done. 2 died of myocardial infarction in the postoperative period and one who had chronic obstructive airway disease died after reoperation for postoperative bleeding. The bleeding was controlled but unfortunately he aspirated in the recovery ward.

Because of all these complications, transurethral resection of the prostate should not be done without proper indications. With experience the complication rate can be reduced further.

#### **TRANSURETHRAL RESECTION FOR CARCINOMA OF PROSTATE**

"Open" surgery is contraindicated if carcinoma of the prostate is suspected on per-rectal examination when a hard irregular prostate is felt. Trans-

urethral resection is the procedure of choice, not only to clear a channel to relieve the bladder outlet obstruction, but also to obtain a good specimen for pathological diagnosis. Once the diagnosis is confirmed, the patient can be put on hormonal therapy and or radiotherapy depending on the stage of the disease.

### **TRANSURETHRAL RESECTION OF BLADDER NECK (TURBN)**

Bladder outlet obstruction due to hypertrophy of the bladder neck can occur in all age groups, from the very young to the old, overlapping that group due to obstructing prostatic adenoma. It is postulated that the cause of the hypertrophy is due to incoordination of the detrusor muscle contraction and the opening of the bladder neck. In normal circumstances, when the detrusor muscle contracts, the bladder neck will open to allow urine flow. In this condition, due to some unknown cause, contraction of the detrusor muscle is accompanied also by contraction of the bladder neck leading to impediment of urine flow.

As a result, the detrusor muscle hypertrophies to overcome the obstruction and as the bladder neck is also made up of detrusor muscles, it also hypertrophies resulting in further obstruction. Transurethral resection is a simple procedure to break this vicious circle.

One of the side effects of this procedure (and also of prostatectomy) is that of retrograde ejaculation which can be distressing to the young sexually active patient. This can lead to sterility but the patient cannot rely on it as a form of contraception! Patient should be forewarned and reassured. The incidence of this side effect can be reduced by doing bladder neck incision at 5 o'clock position to overcome the obstruction, instead of doing a formal resection.

Transurethral resection of the bladder neck and distal sphincter is also done for the patient with neurogenic bladder having difficulty in bladder emptying. The procedure decreases the outflow resistance and helps to reduce the residual urine and therefore the incidence of infection and harmful back pressure effects on the upper urinary tract.

### **TRANSURETHRAL RESECTION OF BLADDER TUMOURS (TURBT)**

Carcinoma of the bladder is the commonest urogenital tumour in the male. It is 5 times more common in the male than in the female and the commonest presentation is that of painless gross

haematuria. In 40% of cases the IVU may be normal, thus the importance of cystoscopy in the investigation of patients with gross haematuria.

Once the tumour has been confirmed on cystoscopy, transurethral resection of the tumour can be carried out at the same time and the extent of the tumour properly assessed. This is done by complete resection of the intravesical portion of the tumour and then resecting the base of the tumour separately to determine whether the muscle has been infiltrated. Bimanual examination is carried out before and after resection of the tumour to feel for induration and mobility of the tumour. For the superficial tumour, once the lesion has been resected, no further treatment is required except for regular check cystoscopy as 50% of these tumours tend to recur. Tumours which have infiltrated deeper into the detrusor muscle would require radiotherapy, cystectomy or total cystectomy. Often combined radiotherapy and surgery would be needed.

### **ENDOSCOPIC REMOVAL OF LOWER URINARY TRACT STONES**

#### **Bladder stones**

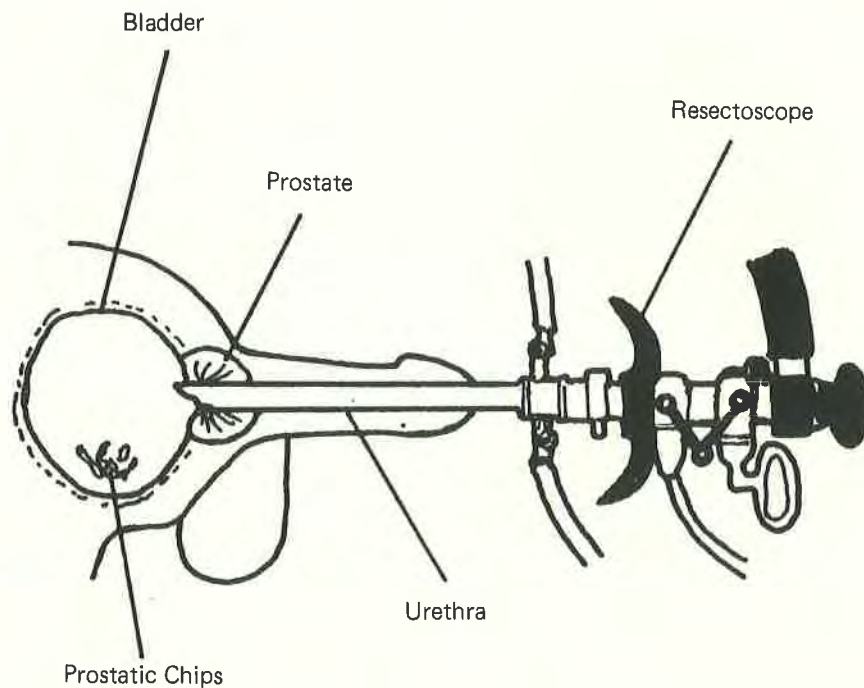
Primary bladder stone is uncommon in Singapore. The majority of bladder stones are associated with bladder outlet obstruction. Therefore, it is inadequate just to remove the bladder stone. Resection of the obstructing prostatic adenoma or bladder neck has to be done to prevent recurrence of the stone and to improve patients' symptoms. In our recent series, about 10% of patients with obstructing benign prostatic adenoma has associated bladder stone.

If the stone is big and the prostatic adenoma is large then it would be prudent to do an open operation. For the big stone and a smaller prostatic adenoma, the adenoma can be resected and vesicolithotomy done for the big stone. Most stones are small enough for us to remove endoscopically followed by transurethral resection of the prostate.

#### **Urethral stones**

Urethral stones originate from the kidneys and ureters. If a urethral stone is impacted in the anterior urethra or the navicular fossa, it can be removed with a stone forceps under caudal anaesthesia. For a stone which is impacted in the posterior urethra, the urethra can be gently dilated and the stone dislodged into the bladder. It can then be scooped out using a resectoscope.

## THE RESECTOSCOPE



### CONCLUSION

The scope of transurethral surgery has widened considerably with the introduction of better endoscopic equipment. The field covers not only the resection of the prostate but also the resection of the bladder neck and bladder sphincters for patients with neurogenic bladders. More bladder stones can now be removed endoscopically with

better designed visual lithotrite. Transurethral resection of bladder tumours is the first line of management in this neoplastic condition and in about 50% of patients who have superficial tumours, no further treatment would be required.

The morbidity and mortality of transurethral surgery is low when properly performed. It brings much benefit to the patients and the results are satisfying.



# Control of Venereal Diseases in Singapore

## How can the G.P. help?

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### INTRODUCTION

The incidence of venereal diseases in Southeast Asian countries has been rising rapidly over the past decade. This is especially so for gonorrhoea. Venereal diseases still carry a social stigma and patients generally feel embarrassed and do not like to be seen in a public Sexually Transmitted Disease (STD) clinic like Middle Road Hospital. In most Southeast Asian countries, general practitioners manage a large proportion of venereal diseases and these cases are seldom reported. Under-reporting contributes to inaccurate statistics and hence inaccurate epidemiological data. Accurate epidemiological data are necessary for effective control of venereal diseases.

### PRESENT SITUATION

In most instances in the general practitioner's clinic curative treatment only is possible. Attempts will be made here to discuss various remedial steps that general practitioners can undertake to improve diagnosis, investigation, treatment and follow up of patients with venereal diseases so as to help in the control of the disease in Singapore.

### ON DIAGNOSIS AND INVESTIGATIONS

Diagnosis of venereal diseases in most private clinics is based on clinical findings alone. Laboratory confirmations, found lacking here, will undoubtedly give more confidence to the general practitioners treating these diseases. Here diagnostic yield of laboratory tests can be improved in several ways when these tests are performed correctly. Firstly for females, the most suitable site to obtain smears and cultures for gonorrhoea should be the endocervix. Most general practitioners tend to use the high vaginal swabs which yield a high percentage of false negative results. Secondly, Stuart transport media should not be used locally as it is usually not possible to get positive yield if cultured beyond two hours after

collection due to the climatic condition of Singapore.

The use of the do-it-yourself Rapid Plasma Reagin (RPR) card test for the diagnosis of syphilis and the Jembac culture plates for diagnosis of gonorrhoea should be encouraged in the private clinics. With the RPR card tests readily available, private practitioners can offer serology tests at the necessary intervals.

Patients presenting with penile ulcers should preferably be referred to Middle Road Hospital for investigations as most of these investigations like the dark ground studies, *H. ducreyi* cultures and Herpes virus culture and serology require special laboratory facilities usually not available in the private clinics.

General practitioners should be alert in picking up sequelae and complications of venereal diseases especially gonococcal ophthalmia neonatorum, pelvic inflammatory diseases and congenital syphilis and report them accordingly. This is because the prevalence of these conditions gives an index of control of venereal diseases in the community and proper diagnosis, and reporting of these conditions will enable us to understand and control venereal diseases in Singapore better.

### ON TREATMENT

Since the discovery of the penicillin resistant Penicillinase Producing *N. gonorrhoeae* (PPNG) strains in 1976, available epidemiological data from most Southeast Asian countries show that PPNG infections have increased significantly over the past four years. The percentages of PPNG strains amongst the gonorrhoea infections were about 19% and 40% in 1979 in Singapore<sup>1</sup> and the Philippines<sup>2</sup> respectively. This means that doctors who have traditionally been using penicillin or its analogues for the treatment of gonorrhoea will encounter a higher failure rate. Hence it becomes necessary for the private practitioners to constantly update their knowledge on these changes

through journals, local epidemiological bulletins and by attending forums and seminars on these topics not uncommonly organised by various medical bodies.

Private clinics without *N. gonorrhoea* culture facilities to confirm PPNG strains should resort to 'Second Line' antibiotics like Kanamycin, Spectinomycin and Cefotaxime instead of penicillin in the treatment of gonorrhoea<sup>7</sup>. Appropriate doses of the antibiotics should be given to prevent development of resistant strains.

Tetracyclines and co-trimoxazole should not be used for the treatment of gonorrhoea in Singapore as they appeared less effective locally and would lead to a high percentage of treatment failure if used<sup>3</sup>. In addition they may mask incubating syphilis.

### ON FOLLOW-UP OF PATIENTS

This important step in the control of venereal disease locally is usually lacking in the private sector. Most patients are not told to return for repeat smears and cultures nor for serology after completion of treatment to check for cures.

The high endemicity of PPNG strains in Southeast Asia has made this aspect of management more important than previously. General practitioners should make an attempt to see these patients on two to three occasions within a fortnight after treatment of their patients with gonorrhoea. This is especially imperative when penicillin has been used. During follow-up, smears and cultures should be done even if the patient is asymptomatic and serology should be repeated at six and twelve weeks after exposure to exclude incubating syphilis.

### ON CONTACT TRACING

This is grossly lacking in the private sector. One should aim to screen all contacts of patients if possible and this should be done speedily to minimise the chances of infections being further disseminated into the society.

Interviewing for contact can be done by the general practitioners at the first consultation. Particulars like names, descriptions and addresses of contacts should be obtained and patients should be educated on the importance of bringing contacts for check-up.

A more practical approach here is for the general practitioners to collect the necessary data and pass them to the Epidemiological Control Unit of Middle Road Hospital for action since most private practitioners do not have the time, ex-

pertise and experience in contact tracing. This is especially useful if the primary contact is a prostitute. It must be stressed here that the information supplied must be adequate as many a time the meagre information supplied is of little use for contact tracing.

### ON EPIDEMIOLOGICAL TREATMENT AND PREVENTIVE TREATMENT

Chemoprophylaxis and preventive antibiotics prescribed by private practitioners are not uncommon in Southeast Asian Countries and this has done more damage than good for the control of venereal diseases locally<sup>3</sup>. There is no antibiotic that will prevent all venereal diseases and harmful effects of chemoprophylaxis like drug reactions, masking of other venereal diseases, promotion of asymptomatic carriers, promotion of development of resistant strains and promotion of patients' complacency will occur.

### ON HEALTH EDUCATION

General practitioners can play a major role in this area as patients with venereal diseases usually seek their counsel. They are thus in a position to render and offer correct advice.

General practitioners should not succumb to pressures by patients and administer prophylactic antibiotics for reasons mentioned earlier. They should instead encourage patients to adopt basic actions like the use of preventive measures, seeking early diagnosis and treatment whenever the need arises and to co-operate with the doctors on their treatment, follow-up and contact tracing.

Greater stress should be focussed on the value of condoms in preventing the spread of venereal diseases, recognition of symptoms of venereal diseases, the existence of asymptomatic carriers, likelihood of asymptomatic carriers developing irreversible complications and finally the importance of keeping a tag on sex contacts and co-operation by providing necessary information for epidemiological control.

### ON HIGH RISK PATIENTS

Those patients with venereal diseases and who are considered 'high risk' should be identified by the general practitioners. These patients usually include the prostitutes, seamen, the homosexuals, army personnel and the drug addicts.

In Southeast Asia the contribution of venereal disease from prostitutes is high. They are impli-

cated as primary contacts in 60% of sexually transmitted disease infections in the male in Singapore in 1979<sup>4</sup>. In Thailand and Indonesia they were cited as the commonest source of infection. In the Philippines<sup>5</sup> in 1969, 8.5% of 702 prostitutes had gonorrhoea and in Singapore in 1977 8% of 200 prostitutes were found to have positive cervical cultures for gonorrhoea, 46% with positive serology for syphilis<sup>8</sup>.

Close surveillance of this group of patients by the general practitioners treating them will undoubtedly reduce the reservoir of venereal diseases in Singapore. Single treatment alone for these patients is inadequate. Test of cure by repeated smears, cultures and serology is mandatory. The general practitioners should encourage these patients to come for regular check-up.

In Singapore better control of venereal diseases has been achieved since the introduction of a special scheme for prostitutes in 1976<sup>6</sup>. Here selected private practitioners work in close liaison with the Epidemiological Control Unit of Middle Road Hospital and ensure that prostitutes turn up for regular check-up and treatment where indicated.

## CONCLUSION

There is no doubt that with the full co-operation of all doctors in private practice the control

of venereal diseases in Singapore will improve. Sexually transmitted diseases were made notifiable in Singapore in 1977 and it must be stressed that monthly returns from the private sector will undoubtedly help us understand the disease better and also enable us to implement changes for more effective control whenever the need arises.

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# Grey Scale Ultrasonography

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## INTRODUCTION

The diagnosis of intraabdominal disease depends on the careful recording of the patient's clinical history and physical examination aided by laboratory studies and conventional radiology. Recently, ultrasonography has been introduced as another non-invasive technique which has the added advantage that no radiation is utilised.

This Paper is intended to illustrate the place and use of ultrasound in gastroenterology<sup>1,2</sup>, urology<sup>3,4</sup>, and surgery<sup>2,5</sup>. No reference will be made to its many applications in the field of obstetrics and gynaecology.

## MATERIAL & METHOD

The apparatus used at the Department of Surgery, Changi Hospital was the Sonolayer-22 manufactured by Toshiba which is portable enough to be wheeled to the patient's bedside if the need arises. The linear array ultrasonic probe is held by hand in contact with the abdomen; the angle of the probe can be altered in any direction.

In this study, a probe with a frequency of 3.5 MH was used for all the organs studied although a range of probes with varying frequencies would provide better pictures.

**Patient Preparation:** No special preparation is necessary. Shaving of abdominal hair is not required. The patient lies supine for most gastroenterological and bladder studies but the prone position is required when the kidneys are being examined. To ensure adequate coupling between the ultrasonic probe and the skin, Aquasonic transmission gel has to be liberally applied onto the skin overlying the area to be examined.

A total of 100 cases were studied. The lesions studied were of abdominal viscera, viz: Liver, Biliary tree, Pancreas, Urogenital tract, Vascular system, Thyroid gland and the Breast.

## RESULTS

### Liver (27 cases)

It was found that the diagnosis of liver abscesses and cysts was most accurate with this modality. Hepatic metastasis, primary hepatomas and cirrhosis of the liver were detectable with an accuracy vis-a-vis the skill of the operator.

### Biliary Tract (23 cases)

Gallstones were demonstrated easily even if they were not opaque radiologically. Enlarged bile ducts and the distended gall bladder were readily recognisable. Perhaps the most useful contribution that ultrasound has provided is the relative ease with which one can now distinguish extra from intra-hepatic causes of jaundice.

### Pancreas (5 cases)

Pancreatic tumours were demonstrable provided they were 3 — 4 cm or more in diameter while acute pancreatitis needed more experience. The greatest value was in the diagnosis of pancreatic pseudocysts.

### Urogenital Tract (25 cases)

The differential diagnosis between cyst or tumour of the kidney was very reliable with ultrasonography. Hydronephrosis and polycystic kidneys were ascertained with equal accuracy. The other application we discovered was the use of ultrasound in determining the degree of infiltration of the bladder wall in vesical cancer.

### Thyroid Gland (10 cases)

It was found that the most useful role of ultrasound was in the differentiation between a cystic and a solid nodule.

#### **Breast (7 cases)**

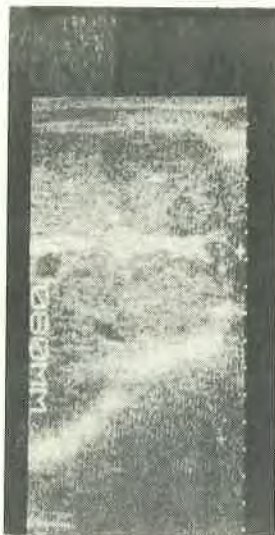
Only cystic masses were easily separated from solid tumours.

#### **Blood Vessels (3 cases)**

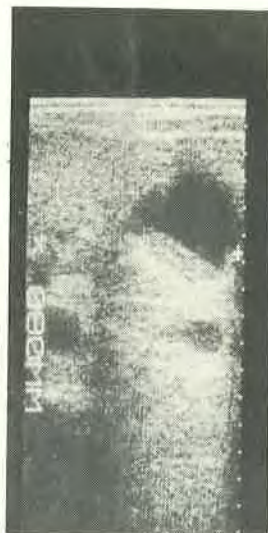
Location, size and shape of abdominal aneurysms were established so that early referral for treatment was possible.



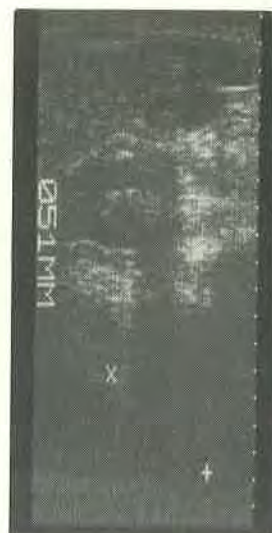
**Normal Liver**



**Liver Secondaries**



**Cirrhotic Nodules**



**Gall Stone**



**Normal longitudinal  
scan of the kidney.**



**Normal Transverse  
Scan of Kidney**



**Renal Cyst**



**Hydronephrotic  
Kidney**



## **THYROID & BREAST:**



**Cystic Thyroid Nodule**



**Breast Tumor**

### **DISCUSSION**

Although ultrasonography is a valuable aid to diagnosis, it does not replace clinical acumen and careful examination of the patient. It cannot supplant conventional radiology but indeed does add further information without recourse to invasive investigations in many instances (eg the P.T.C. in obstructive jaundice). Perhaps the single great advantage of this modality is that it does not involve radiation and yet can provide a reasonable "echo map" of soft tissue structures such as that of the liver, pancreas, spleen, urogenital tract and blood vessels. Thus it compares favourably with

the CT Scan which involves massive amounts of radiation. The other advantages of ultrasound are: it is painless, quick to perform (10-30 minutes) and requires minimal patient co-operation. The main disadvantage is its inability to demonstrate gas containing structures eg Gastrointestinal and Respiratory Tracts. Bone and barium sulphate reflect ultrasonic waves and thus abnormalities in bone cannot be detected.

### **CONCLUSION**

- 1 Ultrasonic scanning is a non-invasive technique which has a wide range of diagnostic applications.
- 2 With the increasingly sophisticated technology being applied to the present generation of real-time systems, it should soon expand its present place and use to the surgeon and physician.

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## Seventh College Convocation & Dinner and Fourth Sreenivasan Oration

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Once every year members of the College gather together for an important occasion — the convocation of new diplomates of the College and the delivery of the Sreenivasan Oration.

This year the occasion was held at the Shangri-La Hotel on Sunday, 15th November 1981 when four new diplomates were received into the College. They were:

Dr Chia Yuit Keen  
Dr Goh Kiat Seng  
Dr Lim Chong Sing  
Dr Lim Chun Choon.

On occasions like this, the President of the College makes a policy speech and Dr V L Fernandez rose to the occasion by stressing the need for greater governmental involvement in the post-graduate training of general practitioners/family physicians. Significantly enough this theme formed also the main message of Dr Fred Samuel who delivered the Fourth Sreenivasan Oration to an attentive audience amongst whom one noted the presence of a few members of the Academy of Medicine and the Dean of the Faculty of Medicine, Prof Edward Tock. It was a pity that the Ministry of Health was not as well represented because their co-operation in any medical training scheme for general practitioners/family physicians will be vital to the success of the scheme.

The College has always been fortunate in the assistance and help given by specialist members of

the profession and this year Dr Loong Si Chin and Dr Arthur Lim Siew Ming were awarded Certificates of Appreciation for their work with the College.

It was pleasant to note that the work of the College with the undergraduates of our Medical School has brought sufficient enthusiastic response from the students themselves. The prizes for the College examination for medical undergraduates this year went to:

1st prize — Mr Michael Chee Wei Ling  
2nd prize — Mr Pang Weng Sun  
3rd prize — Mr Vincent Chow Tak Kwong.

For his work and help in organising the College examinations, the Albert Lim Award this year went to Dr Feng Pao Hsii.

No occasion can be a success without the hard work of the Organising Committee and a word of thanks must be due to Dr Tan Tian Cho and his helpers for again helping out with the organisation of the Convocation and Dinner this year.

The dinner which followed the Convocation and Sreenivasan Oration was well attended, and nearly four hundred members of the College and their guests were present. Once again an enjoyable and pleasant evening followed an occasion of pomp and circumstance as the College moves steadily forth in its work to bring better medical care in primary medicine to the community.

E. K.

## News from the Council

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### **Ninth College Examination**

The Ninth College Examination leading to Diplomate Membership was held on October 1981 and the following candidates were successful:

Dr Chia Yuit Keen  
Dr Goh Kiat Seng  
Dr Lim Chong Sing  
Dr Lim Chun Choon

### **Seventh College Convocation**

The Seventh College Convocation was held at the Shangri-La Hotel on Sunday, 15 November 1981. The four successful candidates were awarded their Diplomate Membership Diplomas by the President of the College, Dr Victor L Fernandez.

Dr Feng Pao Hsui was the recipient of the College's **Albert Lim Award**, whilst Dr Arthur Lim Siew Meng and Dr Loong Si Chin received the prestigious "**Certificate of Appreciation**".

Book Prizes to the top three medical students at the General Practice Examination conducted by the College were awarded to:

Mr Michael Chee Wei Liang	—	1st prize
Mr Pang Weng Sun	—	2nd prize
Mr Vincent Chow Tak Kwong	—	3rd prize

### **The Fourth Sreenivasan Oration**

The Fourth Sreenivasan Oration was also held on Sunday, 15 November 1981. The Orator was Dr Frederick Samuel, Vice-President and Chairman of the Continuing Education Unit of the College of General Practitioners Singapore. The topic of his oration was "Family Medicine — New Directions". The full text of the oration would be published in the next issue of The Singapore Family Physician.

### **Annual Dinner**

The College Convocation and the Fourth Sreenivasan Oration were followed by the College's Annual Dinner and Dance. Over 350 College Members and their distinguished guests were present at the dinner. Entertainment and music was provided by the "Mid-nighters" and dancing was carried on until about midnight.

## Medical News

### **Soy formula is not for prematures**

Portland, Oregon — Infants born "dangerously small" should not be fed a diet of soy-based formula, warns a report in the journal *Pediatrics*.

Soy formulas are often fed to premature infants who are sensitive to the milk-sugar cow-milk formulas, but they may be "nutritionally inadequate" for those infants, say the study's authors, Dr. Jayant P. Shenai et al of the University of Portland.

The team studied 19 low birth-weight infants and found that 10 fed soy-based formulas had significantly less phosphorus than the others. Phosphorus is necessary for bone growth. Almost 20 per cent of the phosphorus in soy-based formulas may not be absorbed by premature infants, Dr. Shenai and associates report.

### **Vitamin B12 lack causes burning feet syndrome**

The burning feet syndrome, characterised by sensations of burning, tingling, numbness and a dull ache in the feet more pronounced at night, and a dull ache in the legs more pronounced by day, is allegedly an early symptom of vitamin B12 deficiency, says a correspondent in the *Medical Journal of Australia*.

Although deficiency of pantothenic acid, nicotinic acid, thiamine and pyridoxine has been incriminated as a cause of the syndrome observed in chronic alcoholics, inmates of prison camps, patients on dialysis and the inhabitants of disadvantaged countries, treatment by the replacement of these agents has not been universally successful.

Paravertebral sympathetic block has also achieved very little success in relieving this neuropathy.

Treatment with vitamin B12 has been very encouraging, however, says J.G. Mathur of Wellington in New South Wales, starting with 1,000 mcg three or four times a week.

"It is alleged that the burning feet syndrome is

an early clinical phase of B12 neuropathy before florid neurological and biochemical deficits ensue," he says (*Med J Aust* 1980, Dec. 27, Vol. 2 No. 13, p.733).

**Chin-On-Chest Cough ...** Psychogenic cough in children is a 'troublesome symptom' not only for the child but the parents. It is also troublesome for the doctor who exhausts his therapeutic armamentarium in the process of trying to cure this persistent and irritating form of coughing. The cough, present in the waking hours but absent during sleep, has an explosive, bark-like or 'honking quality'. School phobia may be one factor and many of these honking children may miss weeks or months of schooling. These children adopt a characteristic chin-on-chest posture when coughing. In general they do not respond to antibiotics or cough suppressants, although some may require tranquilizers or psychotherapy. Psychogenic coughing is 'fairly common' and, in many cases may be incorrectly diagnosed and treated. Early recognition and appropriate guidance 'can minimize school absences and eliminate extensive laboratory testing and prolonged hospitalization.' (*Practitioner* p. 455 May 1980)

### **Salt in processed foods is a hypertension risk**

Washington — A petition drive urging the U.S. Food and Drug Administration to limit the amount of salt allowable in processed foods — as a means to prevent or alleviate hypertension — has been launched by a consumer advocacy group.

The campaign, sponsored by the non-profit Centre for Science in the Public Interest (CSPI), has sent 1,000 or more petitions to such groups as medical school deans, the American Medical Student Association and other health organisations dealing with hypertension, including hypertension authorities.

"Because of the large amount of salt added to processed foods, it is one of the most harmful food additives. Salt should be regulated by FDA just as strictly as less-familiar chemicals," said Michael Jacobson, Ph.D., CSPI executive director.



Americans consume about 10-12 g of salt a day, well over the optimal level of 5 g, said CSPI nutritionist Bonnie Liebman. And 50 to 75 per cent of dietary salt comes from processed foods, according to an FDA advisory committee report issued last summer, she said. "They said that salt should be taken off the list of food substances generally recognised as safe."

Ms Liebman said that the petition drive "could help tremendously ... What's really important is that is would show FDA that they can't dodge the issue. They've had the [committee] report for almost a year now and they've been hoping people won't notice."

### **Acupuncture of breast build-up**

Breast augmentation by acupuncture is a novel method of treatment advocated by Australian practitioner W.T. Tong, who claims that there is no risk of malignancy compared with silicone implants.

He treated a 35-year-old woman, using six needles and electrical stimulation in ten sessions over three weeks.

No immediate appreciable difference was noted, he says, but three months later the patient's bra size had increased from 34A to 34C. (Med J Aust 1981, January 10, Vol. 1, No. 1, p.44).

### **Vitamin C and the pill don't mix, says Don**

Melbourne, Thurs. —Women who take large doses of Vitamin C with the contraceptive pill, risk harmful side effects, according to an Australian medical researcher.

Mr. Michael Briggs, professor of human biology at Deakin University near Melbourne said his research showed that large doses of Vitamin C, prescribed by some doctors to help prevent colds, would increase the amount of oestrogen in the pill being absorbed by the body.

Oestrogen, the pill component which controls a woman's menstrual cycle, has been linked in British tests to side effects including depression, blood clotting, strokes and high blood pressure.

Professor Briggs told The Melbourne Age newspaper today: "oestrogen shares the same absorptive mechanism as Vitamin C.

Professor Briggs is a member of the World Health Organisation steering committee on oral contraceptives. His findings were released in a university press release. — Reuter

### **Therapeutic Tip**

#### **Controlling Senile Osteoporosis**

After the menopause, normal women begin to lose bone at appreciable rates. Oestrogen replacement therapy will halt this in most women. Supplementary calcium has a lesser effect in younger

patients, but in those over 65 years malabsorption of calcium is common and may be partially corrected with large calcium supplements (1 to 2g elemental calcium a day). However, neither oestrogens nor calcium supplements will reverse loss of bone with age, so a patient who has already sustained fractures remains at risk of further fractures.

To be effective, treatment must be prolonged, as the mineral retained as a result of oestrogen administration is lost fairly rapidly after treatment is stopped; small doses are effective — e.g. 5 to 10 ug of ethinyloestradiol daily 3 weeks out of 4.

Three regimens have been advocated for the reversal of established trabecular bone loss. One is the combination of sodium fluoride and calcium supplements (this is associated with a high incidence of side effects); another is alternating phosphate supplements and calcitonin injections; the third entails injections of a fragment of human parathyroid hormone. None is effective in all patients and further clinical trials are needed before any can be recommended for routine use. Brit. Med. J. 282: 1537 (1981)

### **Problems of long-term aspirin use**

Providence — "Take two aspirin" is a verbal prescription so simple it is often taken for granted. But aspirin actually takes a number of tricky chemical twists once in the body, and it is difficult for doctors to know how much to prescribe and for patients to know how much to take — particularly when the drug must be taken for a long time.

Persons may vary from 20 per cent to 70 per cent in their ability to absorb and metabolise the same dose of aspirin, according to Gerhard Levy, Pharm.D., professor of pharmaceuticals at the State University of New York at Buffalo.

It is a significant difference. Taking too much aspirin for long periods has caused more deaths from salicylate poisoning than acute overdoses have, he told the National Symposium on Aspirin, held at Rhode Island Hospital.

"When children die of salicylate [aspirin] poisoning, it's because the parent decided to give them too much or the physician decided to give them too much," he said. Accidental or suicidal overdoses "are usually not fatal."

As a result, doctors carefully monitor dosages and blood levels of aspirin in patients who need long-term treatment for rheumatoid arthritis and children who have rheumatic fever.

For a drug discovered more than 80 years ago, many questions still remain about how aspirin, or acetylsalicylic acid works, Dr. Levy said. Taken orally, aspirin is broken down in the gut and livers to its main component, salicylic acid, which is responsible for the drug's anti-inflammatory and toxic effects.

Aspirin's half-life in blood serum is only 15 or 20 minutes; salicylic acid may build up in blood

plasma and last for hours before it passes out of the body.

Because people differ widely in their ability to break down and absorb the drug, there can be no single correct dosage, Dr. Levy said. A German study in the mid-1960s, for instance, listed nine recommended dosages. And the question took up much of a U.S. Food and Drug Administration report on prescription analgesic and antirheumatic drugs.

What this means is that aspirin, like any other drug, should not be taken lightly, he said. (Asian Med News, Tues. June 16, 1981)

#### Index of Severity For Acute Pediatric Illness

Birmingham, Ala (Univ of Alabama in Birmingham) — The vigor with which a physician pursues a diagnosis or treats an illness frequently is based on the physician's estimation of how sick a child looks or acts, ie, "toxicity." Nelson offers a system for quantifying toxicity in a reproducible manner and suggests that hospital emergency rooms are the most pertinent setting for its use. There, both physicians and nonphysicians can obtain rapid, consistent and valid results, regardless of the child's main complaint.

Nelson devised a form for recording data that defines and quantifies numerous variables, eg, demographic and historic information, clinical manifestations, and vital signs. These data were recorded by nurses in an urban pediatric emergency room for 1,106 consecutive pediatric patients with nontraumatic complaints. The nurses also recorded their own impression of the severity of the child's illness. Later, a physician independently recorded the severity of the child's illness and need for immediate medical care.

Using stepwise multiple-regression analysis, Nelson identified five variables that correlated significantly ( $P < 0.001$ ) with the physicians' ratings. These were respiratory effort, skin color, activity or level of consciousness, temperature, and interest in play. Each variable was rated on a three-point scale (see table).

Children with a total "Severity Index" score of 10 were judged "not sick", those given a score of 8 or 9 were judged "moderately sick," and those receiving a score of 7 or less "very sick." Compared with the physicians' assessment, the severity index scores had a sensitivity of 94.7% for no or mild illness and a 70.4% sensitivity for severe illness. Compared with the ultimate diagnosis, the index had a predictive accuracy of 98.7% for diagnosing nonsevere illness, with a false-negative rate of 1.3%. In predicting major illness, the index had a prediction accuracy of 84.2% and a false-positive rate of 15.8%.

Although the ability of the index to predict need for hospitalization and to rate the severity of illness within several diagnostic categories is good, the author believes the index is best used as a screening device for triage of pediatric patients in an emergency room.

#### Scoring System for Severity Index\*

Variable	Point Value		
	0	1	2
Respiratory effort	Labored or absent	Some distress	No distress
Color	Cyanotic	Pale Flushed Mottled	Normal
Activity	Delirium Stupor Coma	Lethargy	Normal
Temperature	$< 97.4^{\circ}$ or $> 104^{\circ}\text{F}$	$101.1^{\circ}$ — $104^{\circ}\text{F}$	$97.4^{\circ}$ — $101^{\circ}\text{F}$
Play	Refuses to play	Decreased	Normal

\* Adapted with permission from Nelson KG: An index of severity for acute pediatric illness. Am J Public Health 70:804-807, 1980.

Nelson KG: An index of severity for acute pediatric illness. Am J Public Health 70:804-807, 1980.

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- Tuesday, 14.9: HOLIDAY AND TRAVEL ADVICE
- Wednesday, 15.9: THE PATIENT AS AN INDIVIDUAL
- Thursday, 16.9: PROBLEMS OF DRUG MANAGEMENT IN GENERAL PRACTICE
- Friday, 17.9: RESULTS OF EUROPEAN GENERAL PRACTICE RESEARCH
- Saturday, 18.9: THE AIMS AND PROBLEMS OF ADOLESCENT MEDICINE

**Planned Seminars:—**

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- Seminar on Neural therapy
- Seminar on research in general practice
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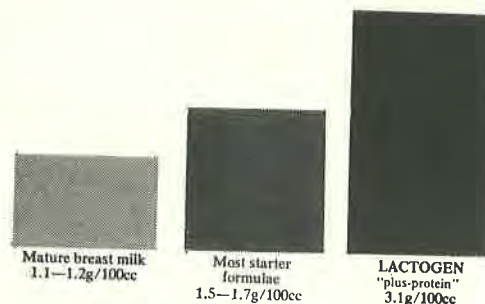
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- \* research in
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