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MEDICAL AUDIT IN GENERAL PRACTICE

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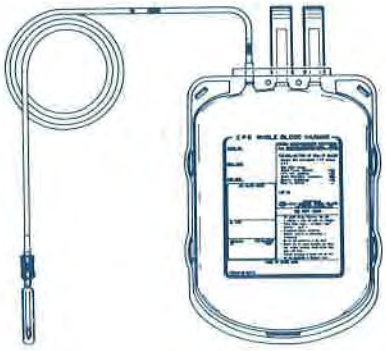

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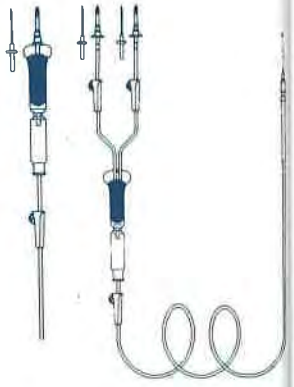

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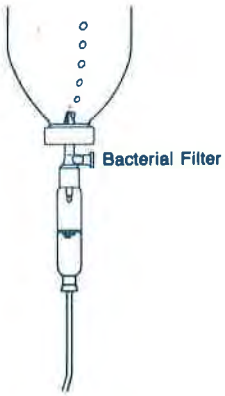

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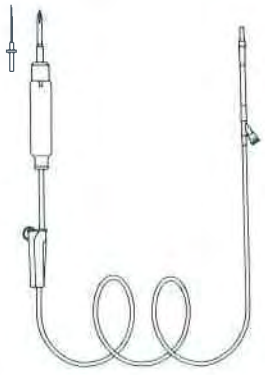

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FROM COLLEGE TO ACADEMY

The past two to three years have seen significant changes in the way our healthcare planners and authorities see the role of the primary care physician. Increasingly the benefits of the holistic approach in the healthcare of the nation by the primary care physician are becoming evident especially in the light of increasing healthcare cost and in the attempt at cost containment. These changes would put the College into greater prominence as the academic body of the Primary Care Physicians.

The terms Family Medicine and Family Physician have also recently become more frequently used to describe the primary care physician or general practitioner. It is therefore, now timely for the College to seriously consider making changes to its name to reflect present thinking and trends.

The proposal to change the name of the College to "Singapore Academy of Family Physicians" would not be out of context for the following reasons:-

1. The label "Family Medicine" is increasing being used to describe the discipline of "General Practice". Thus in the National University of Singapore, General Practice is taught as Family Medicine. The School of Postgraduate Studies, National University of Singapore, will soon have a degree in M. Med (Family Medicine).

2. Worldwide, the label "Family Medicine" is increasingly replacing the label of "General Practice" to reflect a more accurate picture of the nature of the discipline.

3. With the changing trends, both local and abroad, the name of "College of General Practitioners Singapore" will appear out of synchrony.

The College Council has deliberated on the change of name for sometime now and at a recent meeting with the Fellowship Committee, it was unanimously agreed that it is time a new name for the College be instituted to reflect current trends. This is only a change in the name of the organisation and is not an attempt to form a new one.

DR ALFRED LOH WEE TIONG
MBBS(S'pore), MCGP(S'pore), FCGP(S'pore), MRCGP(UK)
President
College of General Practitioners Singapore

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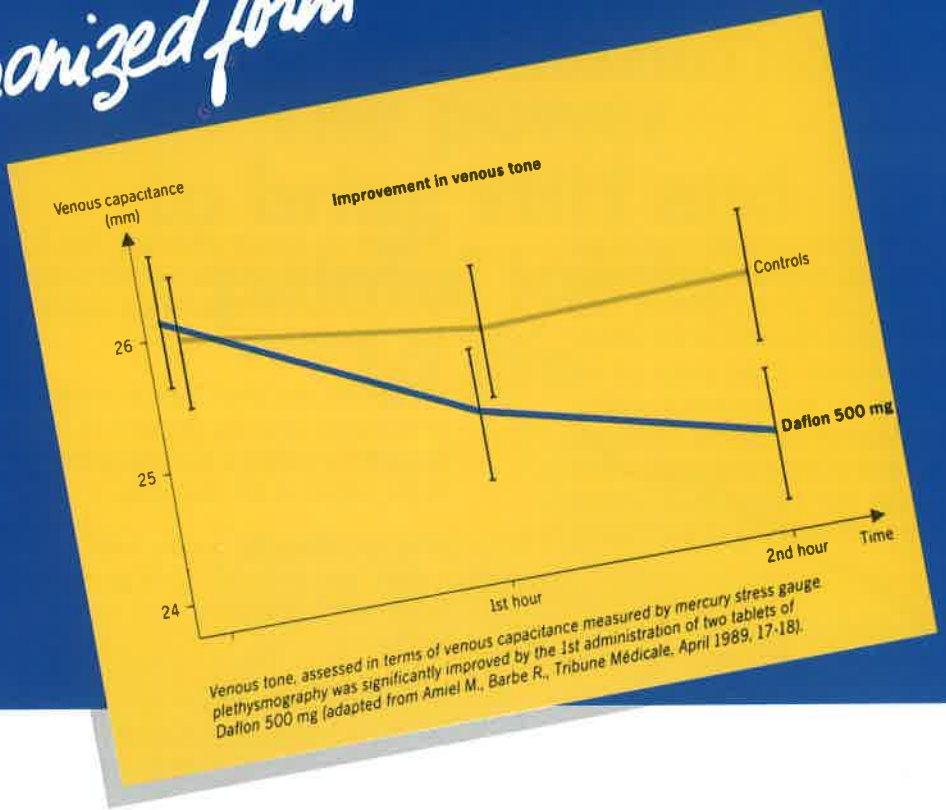

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EDITORIAL

UNDERGRADUATE WARD TEACHING BY FAMILY PHYSICIANS

Traditionally and for generations, medical undergraduates of our National University, during their clinical years, have had their bedside teaching carried out mainly by institutional doctors and academic staff from the University. Inevitably and understandably, the teaching and knowledge imparted were centred around the intrahospital management of the patient. However, the ward admission of a patient represents only one phase of the natural history of the patient's illness, and although the medical student may, during the clerking and history taking, come to know the history of the present illness, he may not be fully aware of the antecedent events occurring during the pre-admission phase and the continuing care during the post-admission phase.

Thus, on graduation (and especially for the young fresh doctor going straight into general practice/ Family Medicine), obvious gaps in his knowledge of practical community-based medicine will surface during his working hours. He will wish he had been taught and given answers to questions as - How was the patient managed by his Family Physician before admission? Why did his Family Physician refer him for admission to hospital? Could the hospital admission have been averted? How will the patient be managed after his discharge from hospital? How will his family be advised on the long-term management and the prognosis, and eventually how will he be accepted back to his family living, his social and work environment? We are thus mainly addressing questions and looking for answers on the management of an individual falling sick but still in the midst of a community. And, as Family Physicians are the main providers of care in the community, they can therefore contribute positively to the teaching of the provision of care during these two phases of an individual's illness. The end result of such bedside ward teaching by Family Physicians of medical students will be the medical student being able to relate the ward admission to antecedent events like relevant past history and previous neglect of self care. He will also come to grasp the principles of post-admission care and long-term followup, including utilization of family and community resources in restoring the patient's health to normality.

On a national level, we all realise that general practice (Family Medicine) is the largest branch of the medical profession and is the **FRONT LINE of the NATION'S HEALTH SERVICE.** It has the greatest responsibility for dealing with medical problems close to people's homes and families. As this service is so cost-effective, upgrading in Family Medicine education is logical. Undergraduate ward teaching by Family Physicians is also timely in the light of the new policy of the National University's emphasis on Primary Care Medicine. The Government, on its part has also recognised the positive contributions by Family Physicians and, amongst the many recommendations made by the Review Committee on National Health Policies, it has also emphasised the need to contain rising medical costs, yet at the same time provide and upgrade the nation's general health. The National University, on its own, has undertaken a curriculum review of its Medical Faculty, where presently the curriculum focuses on the biological sciences and hospital-based specialities including tertiary care medicine. Such review of undergraduate medical education that is being undertaken should, amongst others, have its contents reflecting more closely the nation's health needs, noting the changes in medical practice and the overall organisation of its medical services. A successful programme would generally include important community-based educational experiences.

The College of General Practitioners Singapore has thus offered the services of qualified and experienced Family Physicians as teachers to assist and thus contribute towards enhancing the

teaching of Primary Care Medicine. Such Family Physician teachers could be integrated into combined bedside teaching during medical student clinical year postings at the various teaching hospitals. It is finally hoped that such programmes can contribute considerably to the development of better personal and communication skills in medical students, and to improving their abilities to relate to patients as people by studying patients in hospital and also their pre- and post-hospital management whilst in the community. Such ward teaching would also provide the basis for the greater integration of Family Medicine with other disciplines within the curriculum.

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Chairman, Undergraduate Teaching Committee
College of General Practitioners Singapore

EDITORIAL

MAKING GERIATRIC ASSESSMENTS WORTHWHILE

The proportion of elderly above 65 in Singapore is presently small at 9.0%[1] but is expected to reach 14.5% by the year 2020[2,3]. This means that in the future, family physicians can expect more elderly patients to consult them. Besides providing therapeutic and psychosocial support for their ailments, a case can be made for enlarging the family physician's role. By providing preventive care, the family doctor's work will be in line with the current national policy of "endeavouring to keep the elderly people physically and mentally fit for as long as possible so that they can maintain their normal daily activities and living[4]." Moreover, the goals of preventive care for the elderly have been expanded to that they not only include the early identification of treatable incident disease but also the postponement of the progression of chronic disease[5].

Geriatric health assessment is one of the preventive health measures which family physicians can undertake. With regard to this there are three pertinent issues. Firstly, the assessment should focus not only on the detection of disease but also on functional loss and impairment. This assessment of functional loss should encompass the four important areas of physical function, mental function, social function and family function[6]. Secondly, not all the elderly present their complaints to their doctors. Specific complaints such as bowel and urinary incontinence, deterioration of eyesight and hearing, feet and mobility, and dementia and depression are commonly under-reported by the elderly to their doctors[6]. These are often perceived to be inevitable consequences of ageing and are therefore not readily seen as disease. If elderly patients believe that nothing can be done about such complaints it is entirely reasonable for them not to bring them up. Thirdly, those who are at most risk and thus likely to benefit from help may not come because they are unable to, for example, the immobile and homebound.

What should be assessed then becomes a practical question. A review of studies done[7-10] found that over a third of the elderly population had previously unreported medical problems such as bowel and urinary incontinence, visual and hearing impairment and joint and mobility dysfunction. These studies had adopted predominantly medical problem-oriented approaches. The current consensus however, places emphasis on the functional assessment of elderly people[11]. With early detection and intervention of functional disabilities a reasonable outcome might be expected.

In the United States, Zazove et al reviewed preventive health care in the elderly and came up with a list of components of geriatric screening that "have improved effectiveness in the old old [12]." These items have fulfilled evaluative criteria developed by Klinkman[13]. These were a history of smoking, recording blood pressure, breast examination (for women up to 75), visual acuity and hearing, mobility/ADL/IADL assessment, nutritional status(anaemia and undernutrition), podiatric care, polypharmacy identification, dementia and urinary incontinence identification.

Klinkman and Zazove also found that screening for cancers, diabetes mellitus, hypothyroidism and cholesterol did not prove to be effective in the elderly population.

Whom amongst the elderly do family physicians target for geriatric health assessment? Kane emphasized the assessment of those most likely to be at risk of problems. This included those 75 years and older, those who live alone, the recently widowed within the past two years, those with hospitalization within the past year, those with existing major physical and mental disabilities, the registered blind, deaf, the immobile and homebound[14]. It was felt that this would uncover

those with unmet needs. Work done by Taylor and Ford[15] and the Department of Health and Social Security(DHSS), United Kingdom[16] has however refuted the concept of targeting at risk groups. It was found that elderly people living with relatives also had problems with health and everyday living compared to those living on their own.

Should Singapore family physicians offer every old person a geriatric assessment? Studies done in the United Kingdom have found that the elderly who do not consult their doctors are generally healthy and have not perceived need for medical services[17,18]. This may also apply to the elderly in Singapore.

There is a place for selective geriatric assessment by local family physicians for those who see their doctors. One strategy which can be adopted is the opportunistic approach as practised by Cohen and Busk[19]. They advocate geriatric assessment only for elderly patients consulting at routine clinic or home visits. During such encounters selected aspects of the elderly patient's functional status are screened. The assessment of the elderly patient's health is thus completed in stages over a set period of time for example, six months. This period should not be too prolonged as previous checks carried out may become invalid with unanticipated health changes. The assessment objectives should therefore maximise the benefits to the patient utilizing the existing provisions, reduce the patient's health risks to the minimum and cater to his/her needs[20].

K.K.

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SUPPORT FACILITIES FOR TERMINALLY ILL PATIENTS IN SINGAPORE

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SUMMARY

Increasing concern over the care given to terminally ill patients in Singapore has given rise to a number of charitable organizations which provide care for such patients and their families. This article delineates the type of care and the services that are available to patients who are cared for in their own homes and alternative in-patient services. Though the health authorities do not directly provide this care, support is given by the government in the provision of premises, land and matched funds for building to charitable welfare organizations undertaking such work.

Keyworks:

Cancer, care, home, hospice, palliative, support, terminally ill.

INTRODUCTION

Care of the terminally ill patient in Singapore has till the present time received relatively low priority on the agenda of the health care authorities and medical teaching curriculum. However, in recent years interest in the needs of this group of patients and their families has been kindled. Individual doctors, nurses, other health care professionals, as well as members of the lay public, have been concerned over the problems encountered by their patients, friends or relatives, and many have been motivated to improve the support facilities available to this group of patients. The efforts of the international hospice movement flourishing in the U.K., USA, Canada, Australia and other parts of the world served as a source of ideas. The tools with which to deal with these problems also became available. There has been increasing knowledge of the advances in management of common clinical problems in these patients, particularly pain. This has been promulgated by the World Health Organization which in 1986 lauched its campaign to eradicate cancer pain throughout the world. [1,2,3]

In Singapore, the present hospice movement

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started in 1986 when a group of volunteers, consisting of doctors, nurses and lay people, met at St. Joseph's Home in Jurong as a result of a newspaper article. The group first started providing home care to terminally ill patients in 1987 under the auspices of the Singapore Cancer Society. In 1989, the group formed the **Hospice Care Association (HCA)**, a charitable community welfare organization funded by the Community Chest of Singapore, which received support form the Ministry of Health (MOH) in the form of provision of premises with a grant for rental. The HCA provides a home care service for terminally ill patients in Singapore. It also runs courses for doctors, nurses and lay people on care of terminally ill patients. With the efforts of these and other charitable organizations providing in-patient care, a start has been made to provide more widespread coverage in the care of these patients.

This article delineates the current services and facilities that are available to terminally ill patients and their families.

HOME CARE

Traditionally, those who were sick and dying were cared for in their own homes, attended by professionals who prescribed medicines and advised the family on the provision of care. With increasing sophistication of medical care, many conditions previously nursed at home, such as pneumonia and myocardial infarction, became routinely cared for in hospitals with consequent improvement in morbidity and mortality. Cancer care also followed this trend, so that currently, much of cancer diagnosis, evaluation and therapy necessitates a stay in hospital. Nearly two-thirds of all deaths in Singapore occur in hospital and only some one-third of deaths occur at home.

Care of the dying, traditionally the domain of the family physician, has also become much more complicated with the advent of life-sustaining machinery and the ethical issues associated with them. The multiplicity of severe pathology in a terminally ill patient presents a challenge to the family practitioner, who may feel intimidated that he does not have at his disposal the technology associated with hospitals or the know-how to control many of the severe symptoms. Also, though many doctors derive great satisfaction from the support they are able to give to patients and families going through the crisis of a terminal illness, others feel inadequately trained to deal with emotional issues of such families, and some doctors may have never considered, much less come to terms with, their own mortality. For all these reasons, a hospice home care service, which supports and supplements the efforts of the family doctor, can be of great help.

The Hospice At Home service of the HCA is run by full-time, professional staff, consisting of a medical consultant specialist in Palliative Medicine, three home care nurses and a medical social worker. A trained corps of nearly 200 doctors, nurses and lay volunteers also contributes to the work, their activities being coordinated by the full-time staff. Referrals are received from hospitals, general practitioners, medical social workers or families of patients. The permission of one of the doctors in charge of the patient is sought before a patient is accepted for care. Shared care with the patient's own family doctor is encouraged.

Direct physical care of the patient is mostly given by family members, who are treated as part of the care-giving team. The main imput from the home care team comes from the nurse who makes initial contact and assessment of the problems and needs of the patient and family during a home visit. Subsequent follow-up may be by telephone or home visiting. The nurse reports back to the Hospice At Home team and the appropriate care is planned. This may include physical symptom control, emotional support of either the patient or family members, social and financial support and spiritual aspects. When indicated, the medical consultant will visit the patient at home in order to assess physical symptoms and prescribe treatment. Pain and other symtoms are usually controlled with orally administered drugs. Subcutaneous infusions are used when oral administration is impossible because of intestinal obstruction or when the patient has oral or oesophageal cancer. The social worker is called on when there are especially complicated counselling situations, where family members, such as children, are at special risk, or where financial and other social needs have to be met.

Volunteers play an important role in the support system. They usually look after one patient/family

at any one time, whom they follow through to the end of the illness. Many volunteers get to know their families very well and are usually the first to be contacted in times of crises. Doctor and nurse volunteers may take over most of the professional care from the full-tme staff. Lay volunteers may be involved in befriending and counselling, or they may provide practical help as circumstances arise. Both volunteers and the professional team are contactable on a 24-hour basis, the HCA consultant or a doctor volunteer holding the HCA pager at night and on weekends. This 24-hour availability is considered essential to the home care programme as it allows families to have the confidence to cope.

The whole team follows a common philosophy: to allow the patient to live the fullest possible life that he wants for himself which is possible under the physical and time constraints of the illness. Counselling may be needed if such goals are unrealistic, and this is done by every member of the team. The family is supported to give the best possible care to the patient within their resources. Training and encouragement is given to family members for any special physical care that the patient needs. Conditions are optimized to achieve reconciliation where this is necessary and possible, and to minimize emotional suffering when it is not. Acceptance of the patient's and the family's own views and goals is essential, as the team can prescribe no panacea suitable for every individual or family.

Spiritual issues often come to the forefront as death is faced, and the team supports each patient and family according to their religion or lack thereof. Spiritual counsellors of the appropriate religion are called in when their presence is needed.

Given enough support, most families cope extremely well, even in the presence of the most severe pathology caused by terminal cancer.

Apart from the HCA, the **Singapore Cancer Society** continues to run a hospice home care service started by the original hospice group from St. Joseph's. This service is staffed by one nurse-coordinator and a number of nurse and lay volunteers. A doctor with part-time responsibility for this service has recently been appointed. Staff from the two hospice home care services are in contact with one another and cross-referrals are sometimes made.

Together, the two home care services cover all parts of Singapore and were available to over 500 patients and families in 1991. Nearly all patients were dying of cancer.

A further supplement to home care comes from the Home Nursing Foundation (HNF). These nurses do the regular dressings and catheter changes, a service not duplicated by the hospice services. When family members cannot be trained to do certain routine nursing procedures, patients are referred to the HNF and the care is shared between the services.

The services of the HCA and Singapore Cancer Society staff and volunteers are provided free to the patient. The patient normally pays for his drugs and dressings unless there are financial difficulties, when the medical social worker may arrange for payment of these. As both organizations are funded by charitable funds designated for the underprivileged, they will accept donations of any amounts from patients and families who can afford it and who wish to contribute towards the work.

To supplement the home care service, HCA is planning to start day-care services in 1993 at its site in the MOH buidling at 26, Dunearn Road.

FINANCIAL SUPPORT

Many patients and families are under stress from financial pressures brought on by extensive hospitalization costs, the search for exotic cures and loss of employment by the patient and/or the chief care giver. When financial support is necessary, the medical social worker can identify the usual sources of social support such as application for public assistance, supplement of school fees, etc. In many cases charitable sources of funds with less stringent conditions attached are helpful. These include charities such as Catholic Welfare Services and the Singapore Cancer Society. The Hospice Care Association also has a separate fund to help terminally ill patients in financial need. (Table 1).

LOAN AND RENTAL OF EQUIPMENT

Specialized equipment needed for home care is available from a number of sources. The HCA has wheelchairs, commodes, hospital beds, oxygen concentrators, syringe drivers and infusion pumps which it lends to its patients either free or at a very low charge. Infusion pumps are also available on laon from Singapore General Hospital and National University Hospital for their own patients and can also be rented from Transmedic Pte Ltd. Guardian Pharmacy has wheelchairs for rent and Jardine Parrish rents oxygen concentrators. Tank oxygen is supplied by Soxal Pte Ltd at considerable cost. Other organizations which rent out medical equipment include the Nightingale Nursing Home and Rehab Mart. (Table 1).

TABLE 1: USEFUL ADDRESSES AND TELEPHONE NUMBERS

Organization	Services	Address	Telephone
Hospice Care Association	home care medical advice equipment financial aid	26 Dunearn Rd S(1130)	251 2561
Singapore Cancer Society	home care financial aid	15 Enggor St #06-3/4 S(0207)	221 9577
Home Nursing Foundation	nursing care	26 Dunearn Rd S(1130)	252 5677
St Joseph's Home	in-patient care	68 Upper Jurong Rd S(2263)	268 0482
Assisi Home	in-patient care medical advice	820 Thomson Rd S(1129)	253 8844
Ling Kwang Home For Senior-Citizens	in-patient care	156 Serangoon Gdn Way S(1955)	287 5466
Catholic Welfare Services S'pore	financial aid	55 Waterloo St #03-00 S(0718)	337 6165
Guardian Pharmacy	wheelchairs	#B1-05 Centrepoint S(0923)	737 4835
Jardine Parrish	oxygen concentrators	100C Pasir Panjang Rd S(0511)	475 1322
Nightingale Nursing Home	equipment ++	106 Braddell Rd S(1335)	287 6109
Rehab Mart	equipment ++	400 Balastier Rd S(1232)	253 1629
SOXAL Pte Ltd	tank oxygen	16 Jln Buroh S(2260)	265 3788
Transmedic Pte Ltd	infusion pumps oxygen conc	Blk 4 Pasir Panjang Rd #08-34/36 S(0511)	274 6633

IN-PATIENT HOSPICE CARE

For those paitents who have no families or who are unable to be cared for at home, there are currently two places in Singapore which provide in-patient care. **St. Joseph's Home**, a home for the aged supported by Catholic Welfare Services and run by the Canossian sisters, set aside two rooms, 8 male and 8 female beds, for hospice patients in 1985. The hospice patients are usually below age 60 and are admitted because they have severe symptoms poorly controlled at home, because family conditions are totally unsuited to care for them or because they are single and destitute. Occasionally, patients are admitted for respite care. The medical care is provided by two volunteer doctors, a physician and a radiotherapist, who do weekly ward-rounds and are on 24-hour call. Nursing care and other support is provided by Catholic nursing sisters and three trained staff nurses who form the hospice team.

The other in-patient hospice in Singapore is at the **Assisi Home**. This was originally a 50-bedded home for the chronic sick which opened its doors to hospice patients, 6 male and 6 female beds, in 1988. The Assisi Home is affiliated to the Singapore Council of Social Service, now National Council of Social Service, and is subsidized by Mount Alvernia Hospital. It is run by the Catholic Franciscan Sisters of the Divine Motherhood.

Both St. Joseph's Home and the Assisi Home are in the process of acquiring new premises which should be ready in late 1992. St. Joseph's Home will have a purpose-built 22-bedded unit, separate form the old people's home and largely separately staffed. The new Assisi Home will have 38 beds, the majority of which will be designated for hospice patients. It has recently appointed a full-time Medical Director as well as extra nursing staff, and has plans to go into the provision of home care and day care.

Ling Kwang Home for Senior Citizens will be making provision for terminally ill elderly patients in the furture, up to a total of 15 to 24 beds.

Further into the furture, **St.Luke's Home** for the Aged Sick, run by a conglomeration of Protestant Church organizations, has planned some 20 hospice beds which will come on-stream in 1994-95.

HOSPITAL CARE

The other place where many terminally ill patients are cared for is in hospital. Many are admitted because of severe symptoms and because the family feels unable to cope. Others continue to receive treatment which necessitates hospitalization. Currently, there are no specialized facilities in Singapore hospitals equipped to cope with the multidisciplinary problems of these patients. They tend to be scattered throughout the hospitals in acute medical, surgical, oncology, ENT, orthopaedic or gynaecology beds. It is hoped that in the furture, palliative care teams may be started in various hospitals where there are interested doctors and nurses. One government re-structed hospital is looking into the possibility of having beds set aside for palliative care. With such developments, it is hoped that care for the terminally ill patient may be more complete and coordinated.

CONCLUSION

It will be possible for the majority of patients with terminal illness to be cared for at home by their own families. This is both cost-effective and feasible, given better coverage by home care services. Home care may be supplemented by brief spells in a hospital or in-patient hospice unit for managment of acute medical problems, for procedures such as nerve blocks, blood transfusion, abdominal or pleurocentesis, or for rest and respite for the family. Two-thirds of HCA home care patients are able to die at home, often to the satisfaction of the relatives who feel they have been able to care for their own and fulfilled their final wishes. For those who have no family or whose circumstances make home care impossible, in-patient hospices are an alternative to acute care hospital wards. It is hoped that in future, comprehensive palliative care services can be built up in Singapore so that the patient may receive coordinated care wherever he is, at home, in a hospice or in hospital.

ACKNOWLEDGEMENT

I thank Dr Rosalie Shaw for critical reading of the text.

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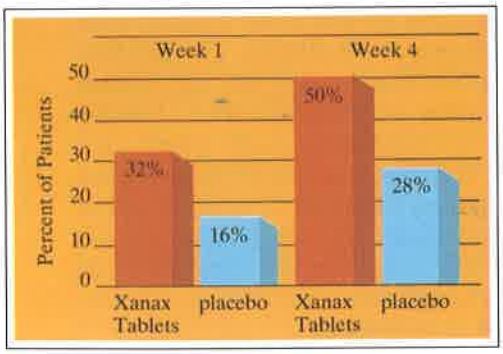
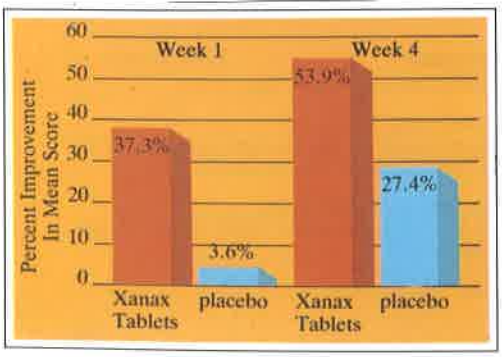


Significant improvement on Physician's Global Evaluation from first week[2]

Improvement in Physician's Global Evaluation



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MANAGING THE EMOTIONAL NEEDS OF THE DYING PATIENT

* *Sr. Tan Geraldine*

SUMMARY:

The emotional needs of the terminally ill patient often remain unidentified, ignored or taken for granted in this fast changing world of modern technology. Emotional needs are many — each presenting differently according to the patient's progress of disease, faith, personality, family relationships and his degree of acceptance of his own mortality.

It is impossible to cover the whole spectrum of emotional needs of complex human beings. Two short case-reports are used to highlight some of these needs and the approach to their management.

Keywords:

Emotional needs of dying patient.

INTRODUCTION

Hospice care embraces every aspect of care of the whole person–physical, psychological, social and spiritual. Emotional support for the paitent is an essential aspect of his care. The emotional needs of the dying have been aptly noted to fall into three general categories of requests as shown in Table 1[1].

Canossian Daughters of Charity
SRN (Singapore)
Oncological Nursing (U.K.)
Professional Studies in
Palliative Care (Australia)

The Sister-in-charge
St. Joseph's Home
Hospice Unit
68, Upper Jurong Road
Singapore 2263.

This is consistent with Davidson's study which found that dying patients ranked their major problems as shown in Table 2[2].

As a hospice team, we seek to meet these needs and to achieve not passive resignation, but active acceptance.

> 'Active acceptance is completely different from passive resignation: the former being something positive and vital to the patient while the latter, being essentially negative, casts a shadow of gloom

TABLE 1:

3 general categories of requests of the dying:
*'Don't leave me'
*'Listen to me'
*'Help me'

TABLE 2:

Major problems of the terminally ill patients
*Abandonment
*Loss of self-management
*Intractable pain

across the final phase of the patient's illness'[3].

Ideally, a patient should be able to say:

'I have heard illness out until it has nothing to say to me, and I thank God that I have the last word'[4].

Nursing the terminally ill enriches us in many ways. Firstly it increases our sensitivity and intuition towards their needs. Secondly, it challenges us in coping with our mortality. Finally, each patient is a gift for us, to help us to learn and improve the care that we provide.

Looking back at all the patients that stopped over at St. Joseph's for their final journey, I could not help but believe that they came to allow us to experience, and to be with them in this precious journey of life.

CASE REPORT 1

A 43-year old Chinese man, whom I shall call Mr. Tan, was admitted to our Hospice with abdominal distension and pain. He had cancer of the colon with secondary to the peritoneal wall.

On admission, he was anxious, breathless, tired and restless. He had not slept for the last one week due to pain. Mr. Tan expressed that he would rather be nursed at home, but knew that he needed help with pain control. He was also aware that his wife would not be able to manage because of her work and the care of their two children aged 5 years and 10 months.

Mr. Tan was aware of his diagnosis and prognosis, but he could not accept them. He still hoped for a cure and still expected a miracle with his increasingly fervent prayers.

Mr. Tan was worried about his family and bargained for a longer life span:

'Please give me at least 2 years more to see my daughter settle in shcool and for my son to start calling me 'Daddy'.

'I wish to enjoy my new home with my family a little longer'.

'How can my wife manage without my financial contribution?'.

'How can my children be without a father?'.

He expressed all these thoughts in anguish and tearfulness. In between sobs, he gave a forced smile and murmur:

'I must not cry in front of my family..... I must be strong and keep going.....'

Mr. Tan projected his anger on to an elderly man whose bed was across from his and who was making a fuss, saying:

'You're old, it's time for you to go, but I am young with small children, why are you making a fuss over your illness?'.

He also expressed his guilt about leaving his mother behind:

'How can I be so unfilial as to die before my mother?. It is so terrible to see her crying for me'.

On certain days, Mr. Tan seemed to accept death readily and exclaimed:

'If I must die, let me die quickly. Better not to trouble people too much'.

'I hope to die peacefully and not screaming in pain'.

Although Mr. Tan was a staunch Christian, he still questioned about death:

'I wonder where I will be when I die'.

'Will death take a long time?'.

'I have done nothing in my life, why am I having this sickness?'.

'God is so unfair. He has given me a beautiful family and yet he does not allow me to look after them'.

Management

From what Mr. Tan had expressed, the hospice team tried to identify his emotional needs and to plan, implement and evaluate its management.

Mr. Tan's fears were:

- separation from his loved ones and home;
- loss of his job and his role in the family;
- being unable to complete and fulfil his responsibilities;
  (A major concern was to sell his favourite car to improve the family's financial situation. A relative of his, though not in need of a car, bought it over from him to lessen his anxiety. He was very much at peace after the car was sold)
- how his dependants would cope without him;
- becoming dependent on others, losing control of his physical faculties: 'being a burden', 'being a nuisance';
- being subjected to pain;
  (His pain was controlled by subcutaneous morphine through a syringe driver)
- death itself.

Observing Mr. Tan from his behaviour and his words, we felt that Mrs. Tan must be made aware of his emotional needs too.

(Very often in nursing the terminally ill, we notice that the relatives are not aware of what the patient is going through emotionally).

We discussed his needs with her and felt that Mr. Tan's greatest desire was to be nursed at home. We saw his need for a more secure and quiet enviroment where he could still participate in his role as a son, a husband and a father. We assured Mrs. Tan that we would continue to control his pain with syringe driver at home and would provide any other equipment when required. She agreed having him home on weekends for a start until she had built up her confidence.

We encouraged Mrs. Tan to assure him of her ability to look after the family. The relatives also assured him of their help too. All these relieved his anxiety to the extent that he was able to speak to his wife regarding his desires. e.g.

- which school the daughter should be enrolled in;
- what to do with the money from the Central Provident Fund savings;
- that his mother will be well looked after;
- that the family continue to be faithful to the Christian faith;
- what sort of funeral he wanted.

Besides a better flow of communiction between them, Mrs. Tan was able to sponge him, change his colostomy bag, administer his oxygen and medication. He was proud of her. He once told me when I visited him at home:

'Thank God my wife is so nice and capable'.

Above all, they were able to pray together as a family and this made him more peaceful and accepting towards his impending death.

Mr. Tan was conscious and without pain during his last days. He was grateful for the home support and the relief of his physical pain. What gave him the greatest joy was that his wife nursed him with delicacy and love despite the fact that at times she was the target of his anger. We were touched by the courage and mutual support of this couple and believed that when there is love the giving continued in sincerity and joy.

'You give little when you give of your possessions. It is when you give of yourself that you truly give.

There are those who give with joy and that joy is their reward.

There are those that who give with pain and that pain is their baptism'.

(Kahlil Gibran)

CASE REPORT 2

A 67 year old Indian man, whom I shall call Mr. John, was admitted to our hospice for pain control. He was suffering from carcinoma of the right lung with spinal secondaries and was paraplegic. He was married but his wife had always lived in India and he used to make trips home annually. There were no children.

Mr John was delighted to be accepted in a hospice where he could fulfil his spiritual needs. A friend commented:

> 'Nothing matters to him as long as he can go for his daily Mass'.

For the first two days, was cheerful, bright and polite. Unfortunately, we did not enjoy his cheerful disposition for long. Two days later, he was totally a different man. He became demanding, dissatisfied, suspicious, uncooperative, anxious, fearful, angry and resentful. Mr. John was not an easy man to speak to. He only opened himself to 2 or 3 of us in the team. From the daily discussion of his care plan, we were able to understand him better.

Mr. John had always been a loner. He hopped from job to job until his last employment when he was security guard for 5 years prior to his illness. Living alone, he was in control of his time, his food and his leisure. He loved food and used to go to different hawker centers to enjoy all the different food. Being bed-bound and in a hospice meant the loss of all these things.

During his illness outside, his support network was very poor. At St. Joseph's he became very insecure and demanding. This insecurity was usually increased when someone else in his room needed more attention. Mr. John could not accept the progress of his disease. He still hoped to walk again and to have control over his basic needs. He felt frustrated to be in bed, to be bathed, to be in a wheelchair and to be told what to do. His greatest loss was that he was unable to have food of his choice at any time of the day. He needed self-esteem and to feel being important and useful.

Management

We discussed his problem behaviour at our weekly rounds and the team agreed on:

- helping all staff to understand his difficult situation and to accept his behaviour. We then arranged a member of staff who got on well with him as his nurse.
- We also helped him to understand his needs which were manifested in the various ways because of his background, life-style, personality, disease process and finally his pain.
- We also expressed to him our understanding and acceptance by doing what we could to fulfil his needs.

We supported him by arranging some special diet for his meals. He was extremely touched when one volunteer doctor brought him his favourite food of turtle soup and fish head curry. We encouraged him to do as much as he could, like wheeling himself around the compound and seeing to his basic needs like shaving and dressing himself after bath.

We also arranged for a special volunteer to follow him up regularly and gave him as much attention as we could when the need arose.

We also considered his spiritual needs by bringing him to chapel for daily prayers and weekly Mass.

Pain was one of the factors that contributed to his insecurity and anger. We explained to him the need to be co-operative with us in the control of his pain. We put him on a COMTEN machine, we explained to him the purpose of it and allowed him to adjust it under our supervision. With his cooperation, his pain was very much under control and Mr. John was a much happier person.

TEAMWORK IS A MUST FOR HOSPICE CARE

No one person can provide for all the needs of a terminally ill patient. A team is a much better functioning unit. Each member of the team brings an individual's experiences, weaknesses and strengths to the work.

Effective teamwork increases the quality of care for the terminally ill. Hospice care is a matter of human relationships. There are skills to be learned and insights which can be gained by reading books, but the challenge and the reward of hospice care demands the use of the whole of ourselves to relate to fellow human beings who are in need. This can only be learned and nurtured within a community in which such relationships are valued.

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MANAGEMENT OF PAIN IN THE TERMINALLY ILL PATIENT

Sethi V
MBBS, DMRT, FAMS

SUMMARY

Cancer pain relief is an important but often neglected issue in developed and developing countries. Care givers very often presume that because a patient has a terminal illness he must have symptoms that cannot be controlled. Cancer pain can be severe and persistent and causes the patient to be demoralized and depressed. Experience from modern hospices has shown that up to 90% of pain can be well controlled with orally administered analgesics. In the rest, who do not respond to conventional analgesic regimes, it can, with the addition of co-analgesics and other methods of pain relief, be reduced.

Total Pain

Pain, like other physical symptoms, can be made worse by fear, anxiety, insecurity, loneliness, boredom and depression. This concept that pain is always subjective and has emotional, spiritual, financial and social, as well as physical aspects, is referred to as "Total Pain". Therefore close attention has to be paid to all the factors contributing to an individual patient's pain for some of these may be dealt with by simple remedies.

Chronic Pain

Pain from terminal cancer is a chronic pain and unlike acute pain, gets worse rather then better and grows to occupy the patient's entire attention, day and night. Such pain requires constant relief and pain is what the patient says hurts.

GENERAL PRINCIPLES

Assessment and Diagnosis

It is well known that not all pain in a cancer patient is caused by the cancer. A careful history and accurate assessment are required to determine the reasons for the pain. Individual pains and, if possible, their underlying mechanisms, have to be identified. In addition very frequent assessment of pain is required to monitor the effects of treatment. Special care must be taken to note whether a "new" pain or increased pain is due to progression of the cancer, e.g. early recognition of localised bone pain from a new secondary deposit may mean that radiotherapy can be given

Sr. Consultant
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for quick and effective pain relief.[1] Similarly, chemotherapy and hormone therapy may be very helpful in dealing with generalised bone pain.

Use of Analgesics

The W.H.O. recommendation[4] of a step wise approach to pain control ("The Analgesic Ladder") is a simple and effective guide to the use of analgesics. The ladder starts with the use of non-opiates, to mild opiates, to strong opiate drugs.

1 *Mild Pain*

For mild pain, a non-opiate drug, such as paracetamol or aspirin, can be used. Mefenamic acid can also be used but like aspirin, and unlike paracetamol, it can give rise to gastrointestinal disturbances. The starting dose of paracetamol of 1 Gm 4 hourly can be given to the usual maximum of 4 Gm per day, and usually produces little or no side effects. It is possible to give five 4 hourly doses a day without much trouble or risk of liver toxicity.[2] This extra dose can make a big difference to many patients.

2 *Moderate Pain*

For moderate pain a weak opiate like Codeine Phosphate (30 mg), combined with either paracetamol (500 mg) or aspirin (500 mg), is very effective and the common side effects like constipation and gastric discomfort can be controlled with the usual means used to deal with such problems. Codeine is also available alone but the above combinations seem to work better for most patients. (Note: Both *Panadeine* — Codeine phosphate with Paracetamol — and *Codis* — Codeine phosphate with Asprin — are available locally, but they contain only 8 mg of Codeine Phosphate, which may be an inadequate dose. *Panadeine Forte*, which contains 30 mg of Codeine phosphate with 500 mg of paracetamol, may be more suitable.) For some patients naproxen sodium (550 mg) twice to three times a day seems to be just as effective.

3 *Strong Pain*

For strong pain, strong opiate analgesics are recommended and morphine is the first choice. Morphine's effectiveness is well documented and the dose can be tailored to each patient's needs with no arbitrary upper limit.[2] Another advantage is that it is mainly given by mouth.

Morphine Solution

The initial titration of dose against pain is best done using an elixir (Morphine Sulphate solution 1 mg/ml) which has almost immediate effect. The peak plasma levels are reached within one hour and the duration is about 4 hours. Thus, it is easy to assess the adequacy of pain control and it also allows frequent dose changes.

Morphine, like all other analgesics used in the treatment of cancer pain, should be given in a regular, "by the clock" basis, and not in a "when necessary" (*prn*) basis. In this instance *prn* can easily stand for "pain relieved never".

A starting dose of 10 mg, 4-hourly, can be used although there are times when the starting dose can be as low as 2.5 mg. After 24-48 hours, the total daily amount of morphine can be reassessed and adjusted. This process can be continued till good pain relief is obtained. The dose is titrated against pain with frequent dose reviews and the dose can be increased up to a hundred fold or more (250-400 mg 4-hourly), although most patients will need 200 mg per day or less.[2] The correct dose is that dose that gives good or complete relief of pain without severe side effects.

Once this stage is reached effective pain control can be maintained with twice a day, Morphine Slow Release Tablets (*MS Contin, MST*). Many patients can have many months of very good pain control and can even go back to work. (There was one patient who would spend up to many hours a day playing "mahjong" with her bottle of morphine on the table!) However, there will be many others whose disease is progressing rapidly and who will require continual dose adjustments.

Alternative Routes of Morphine Administration

Other routes for the administration of morphine are rarely needed but if the patient is unable to swallow they have to be considered.

The rectal route can be used and Morphine Slow Release Tablets placed in the rectum against the mucosal wall appear to be just as effective and the patient or family members quickly learn how to do this.

Subcutaneous morphine can be given by continuous infusion using a syringe driver or a morphine pump. The dose needed is usually half of the oral dose.

Spinal opiates can be considered when oral or subcutaneous morphine gives rise to severe or intolerable side effects. However many complications can arise and it is best to restrict this form of administration to hospital patients only.[2]

Adverse Effects of Morphine

Nausea and vomiting occur in about two third's but this problem can be easily dealt with in most patients with the usual doses of the commonly prescribed anti-emetics. More difficult cases may find relief with Tablet *Haloperidol*, 1.5 – 3.0 mg. per day.

Sedation is also frequent at the start of treatment but it is not a problem in most patients for it quickly resolves on its own.

Hallucination and confusion can also be problems, especially in the elderly or those with renal or hepatic dysfunction.

Constipation develops in almost all patients and laxatives should be used prophylactically. A combination of Lactulose and Senokot is very often useful.

In some patients severe sedation and severe nausea and vomiting are very difficult to deal with. These are most likely to be the limiting side effects that do not allow the use of high dose morphine in some patients.

Respiratory depression and addiction with morphine are the most common fears amongst doctors who are reluctant to use morphine. Studies have shown that pain acts as a physiological antagonist of the CNS depressant effects of morphine and if the dose is titrated against the pain such problems do not occur. If, when by other means like radiotherapy or nerve blockage, severe pain becomes absent, then these side effects can become troublesome.[2]

CO-ANALGESICS

This category of drugs may have no analgesic property of their own but when used with opiates or other strong analgesics, they can result in substantial pain relief. The following examples illustrate this use:

Steroids:

for bone pain, pain from hepatomegaly, soft tissue infiltration, raised intracranial pressure and nerve compression

NSAIDs:

for bone pain and tumour fever

Antibiotics:

for fever, cellulitis and abscess

Antidepressants:

for anxiety, depression, restlessness, nerve compression
e.g. amitriptyline

Anticonvulsants:

for nerve compression or infiltration
e.g. "stabbing" pain and "burning" pain
e.g. carbamezapine, sodium valporate

Anxiolytic agents:

for restlessness
e.g. diazepam

OTHER TREATMENT MODALITIES

Surgery: Nerve blocks and other procedures that destroy nerve tissue e.g. coeliac axis, lumbar sympathetic, hypogastric plexus blocks and cordotomies, are not very often done as these are invasive procedures and have complications.

In some selected patients, orthopaedic procedures can give very good pain relief. e.g. internal and external fixation of pathological fractures or

potential fractures, spinal cord decompression and insertion of frames to stabilise vertebral body compression fractures.

Radiotherapy: The role of radiotherapy for pain relief is both well known and well accepted. The recent practice of using large doses and a small number of treatment fractions makes radiotherapy treatment more convenient for patients.[1]

Chemotherapy and hormone therapy, in selected cases with widespread cancer which has been shown to be responsive, can give useful palliation and, at times, prolong life.

MANAGEMENT OF PAIN NOT RESPONSIVE TO OPIATES.

A small proportion of patients, about 10-15%, have pain that is inadequately controlled by opiates, even when the doses given are causing severe and tolerable side effects (see "adverse effects of morphine" above).

For these patients heavy reliance on adjuvant drugs and procedures is required. Examples of such conditions are:

Neuropathic pain is related to direct tumour involvement and this pain is very difficult to control by morphine alone. For example, brachial plexus damage from breast cancer or radiation therapy used to treat breast cancer, lumbosacral plexus damage from recurrent cancer of the cervix, colon or rectum and intercostal nerve or leptomeningeal metastases.[3]

Adjuvant drugs like Dexamethasone 4 mg B.D. or T.D.S., antidepressants like amitriptyline, or anticonvulsants like carbamezapine and diazepam may be needed in addition to morphine. Many times the pain can be only partially relieved but any relief is always welcomed.

Bone Pain from Mechanical Causes comes when there is a compression fracture of a vertebral body or bodies. The usual reason for the pain is a bone fragment that pinches on a nerve root. The pain is only present when there is movement or when bearing weight. If the patient keeps still then there is no pain. This type of pain requires very high doses of morphine for pain control when the patient moves. However, when the patient is resting there is no pain and the morphine gives rise to severe and intolerable side effects. This problem is very difficult to deal with using only analgesics. At times orthopaedic procedures, e.g. insertion of a frame to stabilise the bones, may be justified to help an otherwise bed-bound patient become mobile.[2] Co-analgesics like anti-convulsants may also be very helpful.

CONCLUSION

Pain is perhaps the singlemost demoralizing aspect of terminal cancer. However most times it should be easily controlled with analgesic drugs. Pain that does not respond can usually be reduced by a great extent with the use of adjuvant drugs and other modalities of treatment.

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CONTROL OF SYMPTOMS IN THE DYING PATIENT

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Effective symptom control is very important for those who have only weeks or days to live. They fear pain, choking, shortness of breath or bleeding more than death itself. If we cannot cure, we can at least hope to relieve symptoms, and reassure and comfort our patients.

Good symptom control requires meticulous assessment and frequent review. The doctor must spend time taking a careful history and making a thorough examination in order to determine what is the cause of a symptom and whether or not the cause is reversible.

Symptoms change rapidly at this stage of the disease. New symptoms appear. Old symptoms change in intensity and quality. These need urgent attention if the patient is not to suffer.

Fear and anxiety play a major part in aggravating symptoms. Good symptom control requires a relationship of trust between the patient and the doctor. Careful explanation about the cause of symptoms and the reason why medication has been prescribed plays an important part in alleviating the anxiety which is making things worse.

Patients with advanced cancer attribute all new symptoms to that disease. However, many symptoms are in fact caused by debility, by treatment including medication or by conditions unrelated to cancer. Patients are reassured when told this.

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Caring for terminally ill patients can be very rewarding. Simple measures can bring marked relief. It is not true that nothing more can be done at this stage of the disease. There is always something which can be done.

Prescription of medication is not the only way of treating symptoms. A more comfortable bed, appropriate food, a kind word, gentle massage, the application of a cold or a warm pack: all these can be useful. This is holistic care which sees the suffering person not just as a failing body but as a fellow human being with enhanced emotional, social and spiritual needs at this time.

The focus is no longer on cure nor even on prolonging this phase of the person's life. Our obligation as doctors is to relieve suffering. The dying patient is not a medical failure. We will all die and our fervent wish is that when we are in our last days our medical attendants will have the compassion and wisdom to know when to stop aggressive treatment if this is inappropriate and increasing our suffering. [1,2,3]

In an article of this length it is not possible to give more than a limited survey of some of the more common and most troublesome symptoms which can occur. There are excellent texts available and the reader is recommended to refer to these.

DYSPNOEA

Severe symptoms relating to breathing are particularly distressing not only for the patient but also for the family and the medical staff attending the patient.

Dyspnoea is exacerbated by anxiety. Anxiety is

associated with increased expiratory effort which results in increased pleural pressure leading to alveolar collapse and reduced functioning lung volume. Increased respiratory rate and the associated decrease in tidal volume causes decreased alveolar ventilation. Forceful breathing also increases oxygen demand by increasing the work of the respiratory muscles.

Hence, once reversible causes of dyspnoea such as infection, bronchospasm, cardiac failure, effusion and anaemia have been excluded, it is important to provide measures which will decrease anxiety. This includes encouraging the patients to ask the unspoken questions such as, "Will I choke to death?" or, "Will I stop breathing if I go to sleep?" In addition, the presence of family members, positioning the bed or chair near an open window and instructions to take deep slow breaths can be helpful.

Not all patients with cancer of the lung prefer to sit upright. Some are better lying flat if the tumor mass causes bronchial obstruction in the upright position. The patient with a unilateral pleural effusion is most comfortable when lying on the affected side so that the unaffected lung can expand maximally.

Oxygen is helpful in attacks of acute dyspnoea; however, chronic use of oxygen is rarely helpful. It tends to create more anxiety because there develops a dependency on the flow of oxygen and often there is increasing concern about the level of oxygen in the cylinder or the adequacy of the oxygen concentrator.

Morphine and anxiolytics such as diazepam and lorazepam have a major role in the relief of dyspnoea in the terminally ill. Contrary to what is feared, small doses of these drugs do not hasten the patient's death. The goal is to relieve the sense of breathlessness subjectively experienced by the patient. If the patient is not already on morphine for pain, start with morphine mixture 2.5 – 5mg every 4 hours. The right dose is achieved when the patient responds positively to the question "Are you more comfortable now?" If the patient is confused, the dose should be increased until the signs of agitation such as pulling at the oxygen mask or repeated attempts to sit up have gone.

NAUSEA AND VOMITING

There are many causes of nausea and vomiting in terminally ill patients. Morphine is often suspected but is rarely the cause of the problem. Unrelieved severe pain is more likely to be responsible.

Endogenous chemical factors are a common cause of nausea. These include emetogenic agents produced by cancer cells, toxic effects of infection or biochemical abnormalities such as uraemia and hypercalcaemia.

Drugs such as non-steroidal anti-inflammatory drugs and steroids can be responsible for gastric irritation. Other drugs, such as digoxin, can reach toxic levels in the dehydrated terminally ill patient. Raised intracranial pressure due to brain metastases should be considered if headache is also present.

Coughing spasms, especially when there is tenacious sputum, can induce vomiting. Mucolytics such as bromhexine can be helpful in such cases.

If possible, the cause of the vomiting should be treated and anti-emetic medication given regularly. Centrally acting anti-emetics such as major tranquilizers are more effective in these patients than those such as metoclopramide which act primarily at the level of the gastrointestinal tract. Haloperidol 1.5mg TDS is usually effective. If the patient is unable to retain oral medication, haloperidol 2.5 – 5mg/24 hours can be given by subcutaneous infusion.

Intravenous fluid replacement is rarely necessary. Even those patients who are vomiting can take small sips of fluid and when the medication takes effect, oral intake can be increased.

Patients who cannot tolerate major tranquilizers because of previous extra-pyramidal side effects can be given antihistamines such as dimenhydrinate, promethazine or diphenhydramine. These can be used in combination with haloperidol if nausea is difficult to control. Benzodiazepines such as lorazepam can also be very helpful if the patient is anxious.

BOWEL OBSTRUCTION

The management of bowel obstruction depends on the level of the obstruction and on whether or not the obstruction is reversible. Use of the "drip and suck" regime with intravenous fluids and nasogastric tube is only applicable if the obstruction is likely to be reversible.

The patient with irreversible gasto-intestinal obstruction can be managed at home if this is where the patient wishes to be. Parenteral medication will be needed to control abdominal pain and nausea. (Morphine and haloperidol can be given by subcutaneous infusion with a syringe driver. Buscopan or atropine can be added if colic persists.)

Hydration can be maintained with oral intake despite episodic vomiting. Many patients find that they can tolerate vomiting once or twice a day if the nausea is adequately controlled.

Bowel softeners should be continued and the colon emptied with enemas or suppositories. In some cases using these measures, the obstruction resolves. A short course of high dose steroid (up to 48mg dexamethasone intravenously per day for five days) can be effective in relieving the obstruction, at least temporarily.

SORE MOUTH

Many terminally ill patients develop painful dry mouths. Attention to oral hygiene is important. Food debris should be removed with dental floss and the teeth cleaned at least twice a day. Encourage patients to rinse well with plain water after food. More potent mouth rinses often further inflame the oral mucosa.

Candidiasis (thrush) is common and should always be looked for in patients who complain of food sticking or not being able to swallow. This condition is easily treated with mouth care and nystatin suspension 1ml 4 hourly. Benzydamine rinse is helpful for patients with badly ulcerated mouths.

In the hours prior to death the family can be instructed to use cotton buds moistened with water to clean and moisten the tongue, teeth, palate and buccal mucosa. A little petroleum jelly applied to the lips will increase the patient's comfort.

HICCUPS

Intractable hiccups can cause insomnia, worsen fatigue, intensify nausea and increase pain if the patient has pain on movement.

Gastric distension can sometimes be the cause of hiccups and it is useful to give instructions about eating only small quantities and to encourage the family not to "push" food with these patients. Medications such as metoclopramide or domperidone which increase gastric emptying, can be helpful.

Largactil 25mg 4 – 6 hourly has been the drug of choice to interrupt the cycle of hiccups. However, nifedipine 10 – 20mg TDS has been found to be very effective if chorpromazine has not helped.

FUNGATING WOUNDS

The main goal of treatment for fungating wounds is control of the offensive odour which so often results in social isolation of the patient. Fungating lesions are a source of embarassment to patients as well as being a constant reminder of the progressive nature of the disease.

Radiotherapy, chemotherapy and hormone manipulation with drugs such as tamoxifen in breast cancer should be considered. Dressings should be absorbent and should be changed at least twice a day or more frequently if there is considerable exudate. The ulcer should then be cleaned gently with saline or with a weak antiseptic solution such as chlorhexidine 1:2000. Active debridement is discouraged as this is painful and may increase the risk of bleeding.

Emulsions such as providone iodine or metronidazole gel are useful in reducing local infection and hence the odour. If the ulcer is severely infected, a course of oral antibiotics including metronidazole will be needed to decrease pain and smell. If metronidazole gel is not available, metronidazole tablets can be crushed and the powder sprinkled over the wound.

CONSTIPATION

Constipation is considered by doctors to be a trivial complaint but for patients this can often be a source of great distress.

Most terminally ill patients are severely constipated either because of drugs, immobility and decreased intake of fibre and fluid. All patients taking morphine will become constipated unless laxatives are given concurrently. This is not an indication for not taking morphine. Rather, the constipation should be anticipated and prevented.

It is not helpful to suggest an increase in fibre intake. Morphine and other opioid drugs interfere with normal peristaltic function. Therefore a peristaltic stimulant such as senna or bisacodyl must be given every day with a softening agent such as lactulose or prune juice in sufficient dose to produce a soft stool at least every second day. This should be the goal even if the patient's oral intake is poor.

If the patient is already constipated, enemas, suppositories or even manual removal may be required in addition to oral laxatives in order to clear the large bowel of hard faecal material.

A rectal examination to exclude faecal impaction should always be done in patients complaining of urinary retention, "diarrhoea" or faecal soiling. A common cause of restlessness in the confused or moribund patient is a full rectum. The patient will settle after the rectum has been emptied.

NUTRITION AND HYDRATION

Families of terminally ill patients are increasingly concerned about the patients' inability to eat. They attribute the progressive weakness and weight loss to malnutrition. They say to the patient, "If only you would eat, you would get strong again". They say to the medical staff. "If he doesn't eat, he will die".

This is an appropriate response when dealing with acute non-terminal disease processes. But if the person is terminally ill this approach can increase suffering.

The family should be helped to come to the realisation that the patient is not dying because he will not eat. Instead he cannot eat because he is dying.

Forcing the patient to take special diets, herbal preparations, large doses of vitamins or minerals will probably not alter the course of the disease and in fact may become a source of misery for the patient. What is right for the patient at this stage is what the patient wants, not what the family wants in the hope of warding off death.

This means that most patients will take a decreasing amount of food and fluid as death approaches. Just as the sense of hunger diminishes at this time so does the sensation of thirst disappear near the time of death. In the last days prior to death, patients take only small sips of fluid but deny feeling thirsty.

Patients dying in hospital are usually given intravenous fluids. This sometimes makes symptom control more difficult. The patient is attached to the tubing and the intravenous stand. He is disturbed by nurses checking the tubing and changing the bags of fluid. The intravenous site must be resited, often with difficulty, if the needle blocks.

Maintaining maximal hydration results in more vomiting, more peripheral oedema, more bronchial secretions and consequently more cough and dyspnoea.

On the other hand, the patient who is not given intravenous fluids and who is given sips of fluid as desired has diminishing oedema, ascites and effusion in these last days. Dyspnoea, pain from distended viscera and soft tissue are often easier to control.

As urine output lessens, the need for the bed pan, for catheterisation or for changing the incontinent patient is decreased. These patients are less restless and the "death rattle" from retained pharyngeal and bronchial secretions is less distressing.

APPROPRIATE THERAPEUTIC GOALS AND THE RELIEF OF SUFFERING

We are all affected by the death of our patients. It is not easy to watch the progressive deterioration

which accompanies this process.

Effective symptom control is only possible if our therapeutic goals are appropriate to this phase of life. This requires that we too accept that death will come. We can help our patients face this event with dignity if our focus is on the relief of suffering rather than on making a last ditch stand against the inevitable.

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REAVEN'S SYNDROME: THE ROLE OF THE FAMILY PHYSICIAN:

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INTRODUCTION:

In his 1988 Banting Lecture, Professor Gerald Reaven from Paolo Alto, California, described the very interesting cluster of risk factors (hyperinsulinaemia, hypertriglyceridaemia, and impaired glucose tolerance) that was associated with hypertension. As these risk factors including hypertension had not previously been described as being associated, it was appropriate that these factors and the risks that they conveyed to the development of early atherosclerosis and myocardial ischaemia and infarction should be called a new syndrome. Hence, in the early days, this syndrome was called Syndrome X. Today, we should give credit to Professor Reaven for directing our attention to these risk factors and their consequences. We should credit him for his observation and experiments and name this syndrome, Reaven's Syndrome. We should not confuse ourselves with the other Syndrome X of the cardiologist, although similarities may be found between it and Reaven's Syndrome.

Since 1988, there has been greater understanding of Reaven's Syndrome, especially its explanation of the aetiology of hypertension and the inappropriateness of the treatment of hypertension alone to reduce the incidence and mortality from myocardial infarction.

Kaplan called these risk factors of hyperinsulinaemia, hypertension, IGT/diabetes mellitus and hypertriglyceridaemia the Deadly Quartet, and indeed, they portend to obesity, early atherosclerosis and myocardial infarction. Our own study of patients who had suffered a myocardial infarction before the age of 45 years and who were non-hypertensive, non-diabetic, normal cholesterolaemic and had normal body mass indices, were all hyperinsulinaemic compared to normal. Our study showed that hyperinsulinaemia was a potent risk factor contributing to early atherosclerosis and myocardial infarction in our patients.

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Over the rest of this article, I shall try to explain and describe how we should look at Reaven's Syndrome. More appropriately, does our understanding Reaven's Syndrome help us to lessen the risk of our patients developing hypertension, diabetes mellitus, early atherosclerosis and myocardial infarction?

PATHOPHYSIOLOGY OF REAVEN'S SYNDROME: (Chart 1)

To appropriately understand Reaven's Syndrome, we should examine the early phase of glucose metabolism — from its absorption from the diet to its uptake by the muscle cell under the influence of insulin. The skeletal muscles form the greatest bulk of tissue in the body that takes up glucose under the influence of insulin.

When glucose is absorbed from the diet it circulates to the pancreas and the islet cell (Islet of Langerhans), which it stimulates to produce insulin. The insulin circulates with the glucose to the insulin receptor on the muscle cell. Here it initiates a host of intra-muscle-cell responses that eventually result in the absorption of glucose. If for any reason, the ability of insulin to initiate this response is inadequate, there will be a lesser uptake of glucose by the muscle cell under this

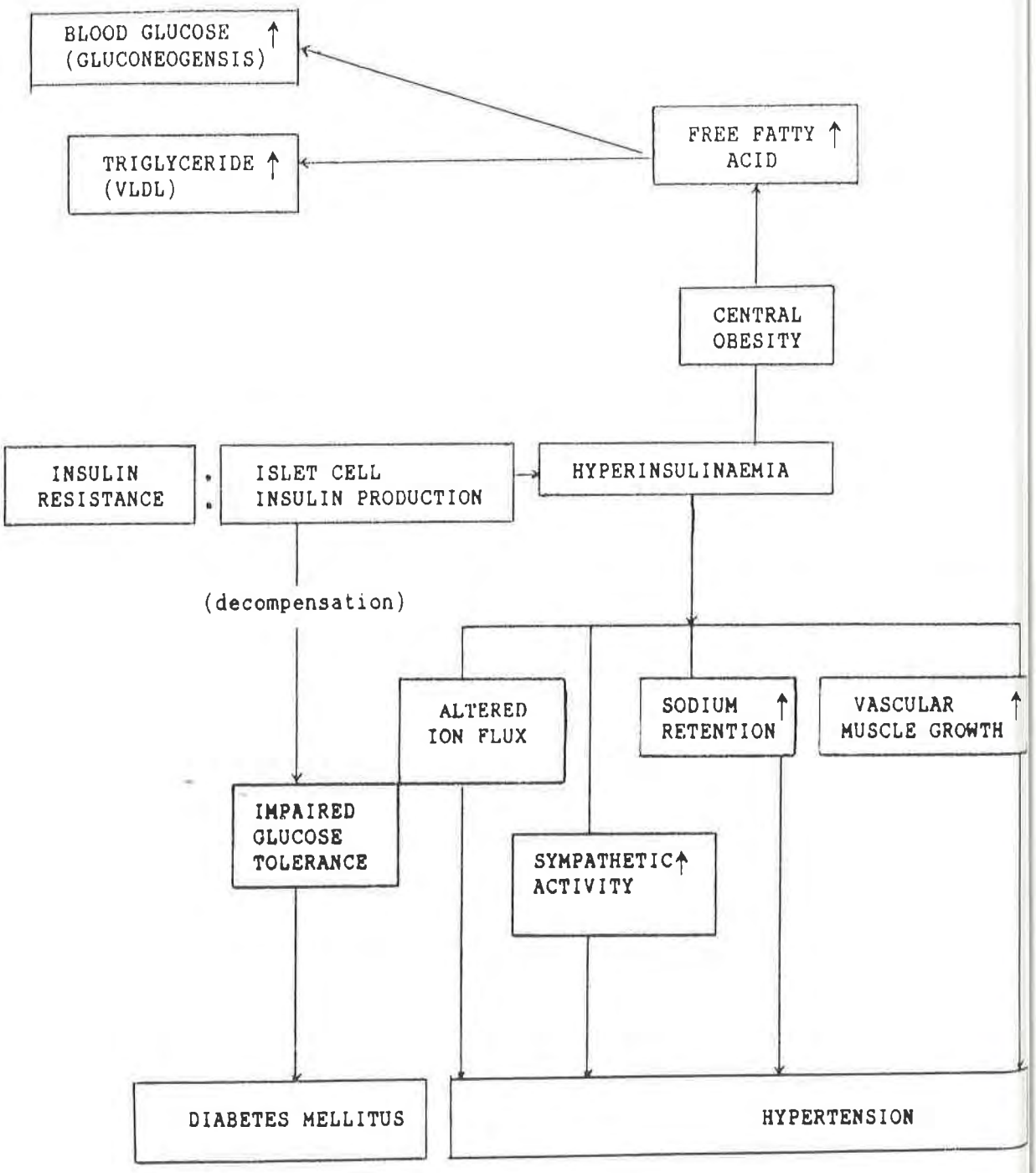


Chart 1
Consequences of insulin resistance and hyperinsulinaemia. Much is dependant on the islet cells' ability to produce insulin to overcome the inherent insulin resistance.

influence of insulin. The inappropriate response of the muscle cell to take up glucose under the stimulus of insulin is referred to as Insulin Resistance. In the presence of insulin resistance, or resistance of the muscle cell to take up glucose mediated by the action of insulin on the insulin receptor, glucose uptake is inappropriately low. More glucose then circulates in the blood stream. This results is greater stimulation of the islet cell, which responds by producing more insulin to act on the muscle cell to overcome the inherent insulin resistance. This results in a state of hyperinsulinaemia. Insulin is a potent growth factor, especially on the smooth muscle cell of the vascular wall. This action of insulin as a growth factor has nothing to do with insulin resistance, as its acts through a different receptor ("growth receptor") and not the insulin receptor for glucose uptake. Overgrowth and multiplication of smooth muscle cells of the vessel wall result in an increase in the wall/lumen ratio of the resistance vessels, namely, the small arteries and arterioles. We know too, that an increase of 5% in the wall/lumen ratio of the blood vessel wall results in an increase of the resistance to blood flow by 25%. This increases the work load on the heart and also results in hypertension.

Besides its growth action on the smooth muscle cells of the blood vessel wall, insulin has many other adverse effects (Chart 1). Retention of sodium through its action on the kidney results in an increase in blood volume, again contributing to hypertension. It also potentiates responses of the vascular smooth muscle cell to sympathetic nerve activity and the response to adrenergic stimulation is heightened. Absolute or relative deficiency of insulin or the mere presence of hyperglycaemia may alter the activity of several ion-exchanging systems. Enzymes such as Na^+/K^+-ATPase, Na^+/H^+ exchanger and Ca^{++}-ATPase have been shown to be influenced by insulin. Increases in cytosolic calcium in insulin target tissues results in various degrees of insulin resistance. It also increases spasm of smooth muscle cells. All these contribute to raising the blood pressure and the consequent risk of early atherosclerosis.

We have discussed insulin resistance, smooth muscle cell overgrowth and other tissue responses to the state of hyperinsulinaemia and the resultant development of hypertension. Now we will discuss Impaired Glucose Tolerance (IGT) and the development of Diabetes Mellitus. As long as the islet cell is able to keep up with increased insulin production to overcome the state of insulin resistance, the level of blood glucose and HbAlc will remain within "normal" limits. However, should insulin production be insufficient due to "exhaustion" of the islet cell, then the amount of insulin that the islet cell can produce in response to the stimulation of glucose will fall. If the fall in insulin production is small, then the rise in blood glucose is mild, i.e. fasting glucose level is below 140 mg/dl. However, this relation between the level of blood glucose and insulin secretion is dependant on the state of insulin resistance and the greater the state of insulin resistance, the higher will be the rise of blood glucose with a small fall in the level of insulin production.

With time and continued and prolonged "over-stimulation" by rising levels of blood glucose, the islet cells will not be able to produce sufficient insulin to overcome the insulin resistance expressed by the muscle cells. Blood glucose rises to diabetic levels, i.e. >140 mg/dl in the fasting state. A state of diabetes mellitus (Type II, NIDDM) is now present. It must be remembered that we are discussing production of insulin by the islet cell at very high levels to overcome insulin resistance. Even when insulin production is inappropriate to prevent a state of impaired glucose tolerance or early diabetes mellitus (Type II, NIDDM), the insulin production by the islet cell is at a very high level compared to the normal non-insulin-resistance state. The level of insulin production by the islet cell only falls to low levels in the later stages of deterioration of the diabetic state, i.e. when the fasting blood glucose exceeds 160-180 mg/dl.

A state of insulin resistance also means that the muscle cell may not receive sufficient glucose to metabolise into energy. The alternative source for energy is to metabolise fats (triglycerides). When the muscle cell metabolises fats, free fatty acids (FFAs) are released into the circulation. These FFAs are taken up by the liver and converted to triglycerides (VLDL) or to glucose through gluconeogensis. The FFAs in circulation increase insulin resistance through their inhibition of hexokinase which is required in the conversion of glucose to glucose-6-phosphate.

Gluconeogensis increases glucose production by the liver and hence FFAs result in increase in blood glucose to stimulate insulin production from the islet and, consequently in earlier exhaustion of insulin production.

DIAGNOSIS:

Now that we understand the pathophysiology of Reaven's Syndrome, we can begin to look at patients with greater acumen and to select out those who would have this syndrome of risks for advice, preventive management and special treatment. We begin with a study of our patient's family history, his anthropometric measurements (height, weight body mass index, waist/hip ratio), blood pressure and finally biochemical assessments.

(i) Family History:

Specifically, we are interested in his family history of diabetes mellitus and hypertension. Although both diabetes mellitus and hypertension have multiple aetiologies, both these disease states are common amongst family members. In Type II diabetes mellitus, if one parent is diabetic, all the siblings have a 40-60% chance of suffering the disease. If both parents are diabetic, then it is most likely that all the siblings will be diabetic in later life. The same calculations may not be applied to hypertension. Our interest in both these disease states is that they are part of Reaven's Syndrome and both have hyperinsulinaemia in common. Hence, if either or both hypertension and diabetes mellitus are present in the parents, then the chances of our patient being hyperinsulinaemic is greater. These diseases in the family history, therefore, heighten our suspicion to our patient's possible disease state, especially with regards to hyperinsulinaemia.

(ii) Anthropometric measurements:

Height and weight is measured for all patients so that calculations of body mass index (BMI) may be made. The BMI is calculated through a formula: Body weight in Kg/(height in meters)^2. This should not exceed 24 in the male and should range from 20-24. This means that a person who has a BMI of less than 24 is within the ideal body weight range. In the patient who is hyperinsulinaemic, his BMI should preferably be in the lower range of normality. The reason for this is that the obese patient has insulin resistance which is between the person with a normal BMI and the Type II diabetic.

Unfortunately, the BMI does not give us an index of fat distribution within the person. We know that the fat that is situated centrally in the abdominal cavity is the "active" fat, i.e. it actively contributes free fatty acids (FFAs) to the blood stream. This raises the levels of triglycerides, promoting atherosclerosis and early myocardial infarction in our patient. Our assessment of this "active" fat distribution is to measure the waist/hip ratio. Unfortunately, this measurement is not often used; however, a general inspection of the habitus of our patient often gives us a good index of his fat distribution.

(iii) Blood Pressure:

A raised blood pressure recorded in a patient with a family history of hypertension and diabetes mellitus is an indication that he has Reaven's Syndrome. Even systolic hypertension is suspect. In our study of young hypertensive patients, aged between 20-30 years, we found that 40% of them were hyperinsulinaemic. In the European study of hyperinsulinaemia in hypertensive subjects aged between 35-55 years, 27% of them were hyperinsulinaemic. One reason for this difference is that our incidence of Diabetes Mellitus (Type II) is much higher (5) than that amongst Europeans (2%).

(iv) Fasting Blood Glucose/Fasting Insulin:

The fasting blood glucose for many is below 80 mg/dl. Unfortunately, the fasting blood glucose does not reflect the state of insulinaemia needed to keep the fasting blood glucose at this level. Hence, it is necessary to measure the corresponding fasting serum insulin level when the fasting blood glucose is measured.

Normal fasting serum insulin levels are <10mU/dl, and are usually 4-6 mU/dl. If fasting levels of insulin are greater than 10 mU/dl then a state of hyperinsulinaemia is present. The serum insulin in the obese and the patient with insulin resistance may range very much above 10 mU/dl in the fasting state. The corresponding blood glucose levels may, however, be well within normal levels i.e. about 80 mg/dl. If the fasting blood glucose levels rise above 90 mg/dl, usually some minor decompensation of insulin secretion has occurred. An oral glucose tolerance test will reveal that the patient has already impaired glucose tolerance. Further decompensation results in the Type II diabetes mellitus state.

(v) Triglycerides:

Of all the biochemical indices, perhaps the most revealing is the level of serum triglycerides. We have discussed previously the process through which these raised levels occur. In the insulin resistant state, serum lipoprotein lipase function is inappropriate. There is defective metabolism of triglycerides or VLDL to LDL and HDL. This accounts for the low levels of HDL in the patient with obesity, Type II diabetes mellitus and the patient with hyperinsulinaemia.

Serum triglycerides are just as much a risk factor for the development of atherosclerosis as cholesterol. Not only are they found deposited in atherosclerotic plaques, they also account for the low level of HDL. Raised levels of triglycerides (>2.40 mmol/dl) potentiate increased tendencies to thrombosis and enhanced atherosclerosis in the patient.

TREATMENT:

As we have seen from the pathophysiology of Reaven's Syndrome, the patient has a host of risk factors, foremost amongst which is the state of Insulin Resistance and consequent Hyperinsulinaemia. The state of insulin resistance is an inherited phenomenon. It is common to several disease states: the patient with essential hypertension (40% of our young hypertensives in the 20-30 years age group have hyperinsulinaemia), Type II diabetes mellitus patients, obese patients, and patients with polycystic ovarian syndrome.

While we realize it is not possible for us to alter the genetic constitution of this hereditary disease, i.e. the state of insulin resistance, it is possible for us to modify the adverse features that the gene/genes confer upon the patient. It does not necessarily mean that having adverse gene or genes would invariably confer upon the patient the full disease state. Much can be done in life-style changes to modify and ameliorate the disease state that the gene or genes endow.

As in all chronic disease states, e.g. diabetes mellitus, hyperlipidaemia, hypertension, gout, etc, a life-style change is most important. In this state of Reaven's Syndrome with insulin resistance, hypertension and hypertriglyceridaemia, a life-style change would include changes in diet to less refined carbohydrates, and avoidance of simple sugars that would raise blood glucose to high levels and require a greater output of insulin. But perhaps, paramount to this disease state is a reduction in diet to maintain a correct body weight.

Avoidance of cigarette smoking is also most important as this habit lowers HDL. It is known that those who follow an exercise regime would, as a natural extension to their discipline, eat correctly and not indulge in unpleasant social habits like smoking and excesses of alcohol consumption. A regular exercise programme, be it walking or jogging, confers many biochemical benefits to the exerciser. HDL is increased; glucose is better utilized through greater tissue perfusion. Insulin secretion is also reduced. With weight reduction, mostly of fat, insulin resistance is further reduced. Blood pressure, especially the diastolic blood pressure, falls with exercise. All these benefits are derived from a simple change of life-style, and weight reduction, the latter providing the greatest benefit physically and biochemically. But what of the patient who is of normal weight, hypertensive and hyperinsulinaemic? In him, too, a change of life-style and a regular exercise programme will help. It is only when we are certain that his blood pressure cannot be corrected with hygienic means that we should consider drug therapy.

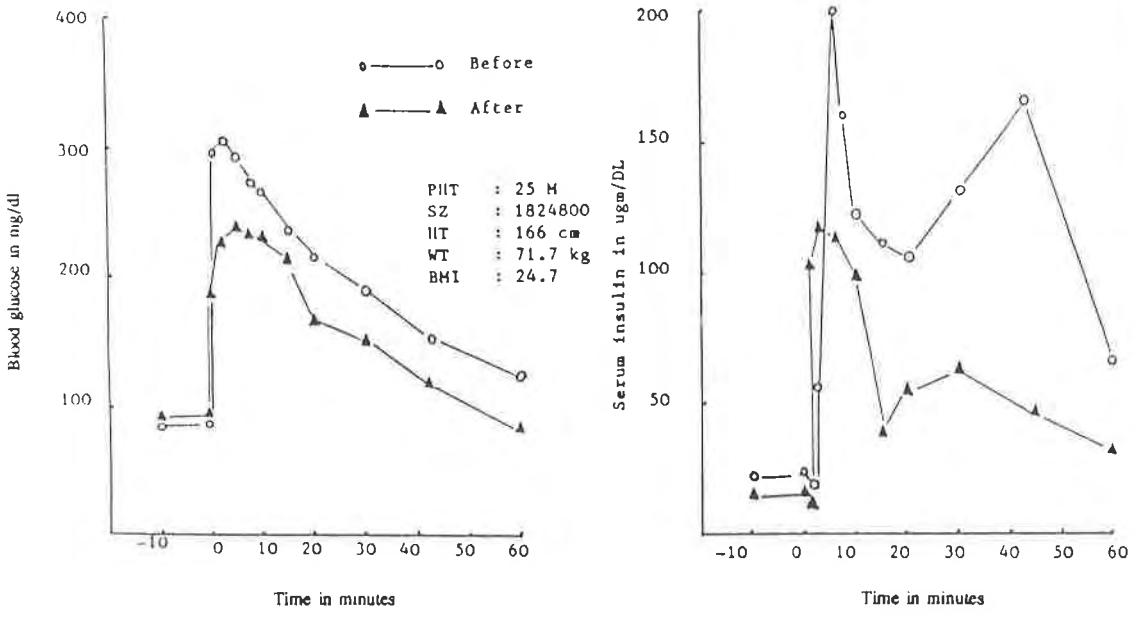
In the past such patients would be treated with diuretics, e.g. chlorothiazide or a combination of chlorothiazide and propranolol as advised in the step-care approach to the treatment of hypertension. Through meta-analysis of the results of several trials that have adopted this regime for the treatment of hypertension, MacMohan showed that, whilst a fall in blood pressure was associated with a 50% fall in cerebral strokes, myocardial infarction incidence was reduced only by 14%. The reason for this inadequate and poor reduction in the incidence of myocardial infarction was shown in the experiments of Swislocki. Whilst chlorothiazide alone, or with propranolol, or even propranolol alone were effective in reducing blood pressure, both were associated with increasing insulin resistance — i.e. decreasing glucose utilization and increasing insulin production. Atherosclerosis of the blood vessels was promoted, as a consequence, especially in the coronary arteries, and this would result in an increase in the incidence of myocardial infarction. Propranolol, in addition, decreased HDL levels. Fortunately, today, with better therapeutic modalities that do not adversely affect glucose and lipid metabolism, and through proper tailoring of medications to individual patients rather than a general step-care approach to the treatment of hypertension, the incidence of myocardial infarction has been reduced by 35%.

Angiotension Converting Enzymes Inhibitors (ACE-I) have recently been shown to have beneficial effects on glucose metabolism. The uptake of glucose by the tissues is increased and the need for insulin to induce this glucose uptake is reduced. Many researches like Pollare, Berne and Torlone have all shown this benefit of ACE-Inhibitors with captopril.

Our own studies with a long-acting ACE-I (Perindopril) is exemplified in Fig 1. After one year of treatment with Perindopril, our patient shows a lower excursion of blood glucose to a similar 20 gms of glucose given intravenously (IVGTT). This means that there is increased glucose uptake after one year of treatment with this long-acting ACE-I. The corresponding serum insulin produced by the islet cell to induce this uptake of the 20 grams of glucose given intravenously is also similarly much reduced. This means that the amount of insulin required to induce a similar uptake of glucose is very much less treatment with ACE-I (Perindopril). Not only is the amount of insulin reduced, the islet cell is more sensitive to glucose stimulations and responds with an earlier and a more appropriate production of insulin (a "restoration" of the first phase of insulin secretion in response to glucose stimulation). We may conclude from this experiment, that insulin resistance is reduced with ACE-I (Perindopril) therapy.

Fig. 1

Blood glucose and serum insulin levels after 1 year of treatment with Perindopril (4mg daily) in a Hyperinsulinaemic - Hypertensive male. Results of a 20 mg IVGTT. (Tan C E, Chew L.S 1992)



ACE-I therapy very readily blocks the conversion of Angiotensin I to Angiotensin II. We have shown that 25 mg of captopril will very quickly block this conversion of Angiotensin I to Angiotensin II in the blood as revealed through the measurement of serum aldosterone. (Angiotensin II is very unstable and has a short half life and as such cannot be readily measured). Angiotensin II has many properties. Besides being a very potent vasoconstrictor, it also, like insulin, induces growth of the vascular smooth muscle. Hence it cause blood pressure increase by its growth effect and the increase of wall/lumen ratio, and via its very potent vasoconstrictor action. Angiotensin II also stimulates the production of Aldosterone and through this hormone, the retention of sodium and the increase in blood volume and the blood pressure.

It is through its action on Tissue Angiotensin that ACE-I exerts its effect. ACE-I acts directly to prevent the accumulation of tissue-produced Angiotensin II within the smooth muscle cells of the vascular wall. Herein lies the beneficial effect of ACE-I. The reversal of the hypertrophied smooth muscle cell to its former size is what ACE-I does as it blocks Angiotension II in the tissue space. This is how it lowers the raised blood pressure to normal. Camillieri has shown this reversal of hypertrophied smooth muscles cells to its normal size with the ACE-I, Perindopril.

ACE-I also block Kininase II. This allows for the accumulation of Bradykinin in the tissues and in the blood stream. Besides its potent vasodilator action, bradykinin has many interesting pharmacological actions (Table 1). The most relevant pharmacological effects of bradykinin are vasodilation and increased perfusion to tissue. This increases the surface area for glucose uptake. Besides these, it inhibits glucose production from the liver and increases glucose oxidation.

Table 1

PHARMACOLOGICAL PROPERTIES OF BRADYKININ

(a) **Vasodilator activity:**
- (i) Potent vasodilator
- (ii) Increased production of vasodilator Postanoid.
- (iii) Release of Endothelium Derived Relaxing Factor.

(b) **Reaction with Sympathetic Nervous System:**
- (i) Decreased noradrenaline production at blood vessel level.
- (ii) Decreased responsiveness of smooth muscle to adrenergic stimuli.

(c) **Insulin mediated glucose uptake (possibly via an increase in local postaglandin production).**
- (i) Enhanced glucose oxidation.
- (ii) Reduced hepatic glucose production.

The mechanism through which ACE-I increases glucose metabolism and reduces insulin resistance or improves insulin sensitivity may then be thus summarised as follows:

1. Through its inhibition of the growth effects of Angiotensin II on the vascular smooth muscle, it reduces the wall/lumen ratio, and increases perfusion to the muscle.

2. It results in elevation of plasma bradykinin.

3. It reduces the response to sympathetic nervous system activity.

4. Tissue potassium is increased through inhibition of aldosterone production.

CONCLUSION:

ACE-Inhibitors like Captopril (short-acting) and Perindopril (long-acting) have the ability to modify the adverse effects of insulin resistance (Reaven's Syndrome).

Our studies with Perindopril on young hypertensive subjects have produced very effective modifications on glucose metabolism, and reduced glucose-stimulated insulin production to a great extent within one year of therapy. We have not made similar studies with diabetic patients, as these patients have too many confounding indices to measure. However, the ACE-Inhibitors like Perindopril, have shown effective benefits in blood pressure control and preservation of kidney function in the diabetic. We may conclude that ACE-Inhibitor therapy, e.g. with Perindopril, could provide many benefits for the Type II diabetic patient with or without hypertension.

The long term European experience with the ACE-Inhibitor, Perindopril, concludes that Perindopril, either as monotherapy, or with an added diuretic, effectively controls blood pressure in 74% of patients on the first year of therapy. By the third year 81% of patients have effective control of

their blood pressure. This increase in percentage rise in the control of blood pressure by the third year of therapy suggests to us that Perindopril has effected a change in the pathophysiology of the vascular wall — i.e. a reduction of the hypertrophied smooth muscle. This change in pathophysiology of the vessel wall is a most important feature, as increased tissue perfusion follows as a consequence.

Glucose metabolism is increased with greater tissue perfusion. The rise in bradykinin levels in the blood and the tissues also contribute to enhance glucose utilization. Our study in the young men with hypertension reflect this change with Perindopril after one year of therapy.

We may conclude, from our studies, that the ACE-Inhibitor, Perindopril, not only is effective in the control of blood pressure but also has added ability to affect and beneficially modify glucose metabolism and insulin resistance (Reavan's Syndrome).

(**References** *may be obtained from the author*).

Acknowledgement

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MEDICAL AUDIT IN GENERAL PRACTICE WHAT, WHY AND HOW

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SUMMARY

Medical audit is now a significant component of high-quality clinical practice in the UK and North America. The audit cycle comprises the setting of standards in patient care, observation of current practice, comparison of practice with the standards, the implementation of changes to generate improvement, and closure of the loop by reassessment of standards and practice. The incorporation of audit in General Practice may be through practice activity analysis, disease audit, case analysis and patient surveys. The resultant benefits of improved patient care, professional standards and morale make it a worthwhile endeavour, particularly in our pursuit of excellence as General Practitioners.

Keywords:

Medical audit, Audit Cycle, Quality, Evaluation

INTRODUCTION

The term "medical audit" has become one of the latest buzzwords in the health care arena in the UK. Further impetus was gained when several Royal Colleges[1,2,3]. established initiatives in this field. With the recent National Health Service reforms[4], the UK government required medical audit to be an everyday part of medical practice, and since 1991, all General Practitioners (GPs) and hospital staff have had to engage in regular audit.

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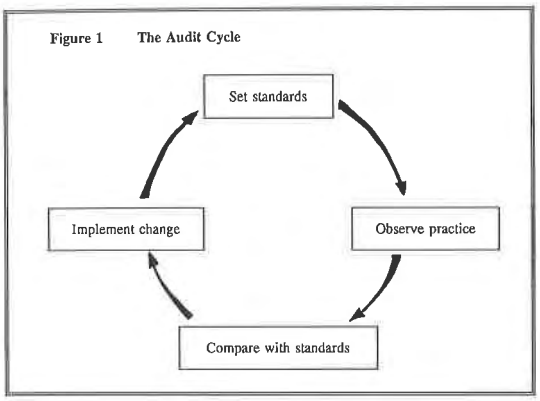
DEFINITIONS

Medical audit is the process whereby doctors systematically and critically review their clinical activities with the objective of improving professional performance and patient care. Although the label may be new, the concepts of quality assurance, practice evaluation and protocol standardisation in medicine certainly are not. In North America, enthusiasm in this field continues to rise to cult proportion, and global interest has been demonstrated by the World Health Organisation[5]. Nonetheless with the advent of medical audit, these variations on the same theme have crystallised into a clearer, more consistent form. Contrary to the lay definition of audit, the emphasis is NOT financial, as in profit and loss or illegality and fraud.



The auditing scheme is usually presented graphically as the Audit Cycle (figure1). Desired standards of practice are agreed upon; current practice is observed to measure existing standards; changes are implemented to improve performance and bring existing standards closer to the desired standards, before proceeding round the cycle again by remeasurement of performance. An example in the care of hypertensive patients might be to set a standard of maintaining the diastolic blood pressure (DBP) below 90. Review of 30 consecutive hypertensives may reveal that the average DBP is 105, and that in a third of these patients, the DBP is consistently out of control. A reasonable plan of action may then be to actively encourage all hypertensive patients known to the clinic to attend at least three-monthly for review. To close the audit loop, another 30 patients are reviewed in a year's time to assess the improvement in mean DBP.

To derive maximum benefit, the audit cycle must be fully completed and possibly repeated. Other key features to successful audit are to conduct it as peer review by locally involved clinicians as a regular, explicit activity, in an objective, non-threatening manner.

WHY BOTHER WITH MEDICAL AUDIT?

A major aspiration of most GPs is to provide optimum care for their patients. More often than not, the motives are altruistic, the dedication is undeniable and the efforts admirable. However, the honest reality is that there also exist those less ideal situations when "machine-gun-speed" consultations are conducted, clinical care is incompetent, patient education is neglected, and prescribing habits become dodgy. The benefits of doing medical audit are at least twofold. On the one hand, audit would enable us to raise our own standards of care even higher; on the other, it would provide evidence favourable to our defence should the quality of care we provide be questioned. When implemented in a supportive environment, audit can also contribute much to continuing medical education, professional self-development and improving cost-effectiveness of practice.

WHAT TO AUDIT?

In simple terms, medical care can be considered in the three main categories of the **structures** of the practice set-up, **processes** involved in patient care, and the **outcomes** of clinical care (Donabedian 1966[6])

The **structures** are the resource inputs of the clinic that go towards patient-care, such as number and grades of staff, opening hours, clinic space and layout. **Processes** refer to the procedures for delivering patient-care, and includes goings-on at clinic consultations, performance of investigations and treatments, documentation of records and referrals to specialists. **Outcomes** are the changes in the patients' health status resulting from the care provided, and include not only the physical and physiological improvements, but also the social and psychological. It has been argued that the value of patient-care lies not so much in the **structures** and **processes** involved (i.e. the "what" and "how" of activities), but in the **outcomes** resulting form clinical care (i.e. the "So what? How does this affect the patient's health?"). In General Practice the proportion of diabetic patients who develop retinopathy or nephropathy may be used as an outcome measure of how good the hyperglycaemia control is. School absence may be an outcome measure to evaluate the diagnosis and management of childhood asthma. Suicide and parasuicide rates might be taken as an outcome measure of how well depressed patients are being diagnosed and treated.

Quality in health care may be evaluated from various angles. Maxwell[7] highlighted six components: appropriateness in relation to the community need, acceptability to the society, access to services, equity for all, effectiveness of treatments and economic efficiency of resource utilisation. Although each component is a valuable aspect, what seems to be most commonly scrutinised are how effective the provided care is, as well as how economical and efficient.

HOW TO AUDIT?

Theoretically the variety of formats by which audit is conducted is as diverse as creativity and imagination permits. However, the realistic constraints of time, energy and money usually dictate the practicality and feasibility of the method. The more common methods employed in General Practice include:

1. Practice Activity Analysis

Vital practice statistics such as workload, diagnosis, referral rates and waiting times can be counted for trend analysis. Ideally for valid conclusions to be drawn, this data should be collected prospectively on special recording forms for a specified period or until a quota of patients in a certain category is reached. Data from several participating GPs could even be pooled together and analysed to produce aggregated information as well as individualised, but confidential, statistics. The individual GPs could then evaluate their performance against targeted standards and decide what changes are appropriate for themselves.

2. Disease Audit

Clinical practice can be reviewed in the light of a protocol defined for that specific disease. For example, a diabetic care plan could include diagnostic criteria (e.g. positive glucose tolerance test), periodic investigations (e.g. glycosylated haemoglobin every 6 months) and patient education (e.g. diet). Other conditions amenable to care protocols include hypertension, thyroid disease and antenatal care. Evaluating the component facets of clinical practice could be facilitated enormously using disease registers and computerised records, but in the absence of such sophisticated arrangements, it is often adequate just to do a periodic random review of clinical records (e.g. assess the records of the next 10 diabetic patients who turn up).

Obviously this hinges on accurate and complete records, and may be misleading if events tended to occur but were not written down.

3. Case Analysis

Case analysis involves the careful scrutiny of certain cases with particularly unusual, important or problematic characteristics. The corollary in hospital practice is the presentation of "fascinomas" at grand rounds. Evaluation may then be undertaken by the individual GPs or with peer groups, and directed towards educational purposes. Examples include an atypical presentation of a neoplasm, management horrors regarding an awkward non-compliant patient, and novel successful treatment regimes. Unfortunately case analysis per se often has limited value apart form being staggering or entertaining, but its worth is enhanced if it leads on to the setting of standards, management plans, targets or protocols along the lines of disease audit.

4. Patient Surveys

Exploring the views of patients and their relatives can be highly revealing and informative but equally painstaking, especially if much effort has to be channelled to obtain valid and unbiased responses. Moreover, unlike the empowered consumer in market research and public opinion polls, patients may be less open to convey their perspectives, especially if there is concern that their health care would be jeopardised by "telling tales". Surveys may address patient satisfaction with practice services in general (e.g. opening hours, housecall services), or aspects of treatment or care in particular (e.g. adequacy of information about the disease, effectiveness of medication). The most frequent method used is the short, simple questionnaire with closed questions and checklists of pre-coded answers.

CONCLUSION

Audit promotes logical thinking in doctors who place a value on rational controlled approaches to patient care. This is not to deny the important role of spontaneous clinical judgement and attending to patients as individual persons, but to reduce shoddy practices and bad habits. When conducted well, audit inevitably leads to improved professional standards and morale. There often also are payoffs in greater efficiency and economy in the practice administration, and more appropriate planning of future practice strategies. In our pursuit of excellence as GPs, it would be worth our while making room for medical audit.

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Gastrointestinal Motility Regulator

CEREKINON® Tablets

(Trimebutine maleate)

Brand Name

CEREKINON® Tablets

Generic Name

Trimebutine maleate

Chemical Name

(±) 2-Dimethylamino-2-phenylbutyl 3, 4, 5-trimethoxybenzoate hydrogen maleate

Description

	Content of Trimebutine maleate
CEREKINON Tablets	100 mg/tablet

Indication

Gastrointestinal symptoms associated with chronic gastritis (feeling of abdominal distention, abdominal pain, nausea and eructation)
Irritable bowel syndrome

Administration & dosage

For gastrointestinal symptoms due to chronic gastritis:
Usually, for adults daily dose of 300 mg as trimebutine maleate (3 tablets) in 3 divided doses through oral route. The dose may be increased or decreased according to the age and symptom of patients.
For irritable bowel syndrome:
Usually, for adults daily dose of 300 — 600 mg as trimebutine maleate (3 — 6 tablets) in 3 divided doses through oral route.

Clinical application

1. Clinical effects
   1) Chronic gastritis
   As the results of clinical trials including two comparative double-blind studies, CEREKINON Tablets showed overall improvement rate of 64.1% (including moderate improvement) in the treatment of gastrointestinal symptoms (feeling of abdominal distention, abdominal pain, nausea, and eructation) due to chronic gastritis (526 cases)
   2) Irritable bowel syndrome
   As the results of clinical trials including two comparative double-blind studies, CEREKINON Tablets showed overall improvement rate of 56.5% (including moderate improvement) in the treatment of abnormal stool and gastrointestinal symptoms due to irritable bowel syndrome (642 cases)

Precaution

2. Adverse reactions
Adverse reaction episodes of 259 cases (0.4%) were reported out of total 59,801 cases. The most often encountered adverse reactions were gastrointestinal symptoms such as diarrhea, constipation and thirst.

1. Adverse reactions
   a) Gastrointestinal system
   Constipation, diarrhea, borborygmus, thirst, numbness in the mouth may occur rarely.
   b) Cardiovascular system
   Palpitation may occur rarely.
   c) Psychoneurotic system
   Sleepiness, dizziness, lassitude, headache, may occur rarely.
   d) Hypersensitivity:
   Hypersensitive symptoms such as eruption may occur infrequently. In such case, medication should be discontinued.
2. Medication to pregnant women and nursing mothers
The safety of CEREKINON Tablets in pregnancy or nursing women has not been established. Therefore, CEREKINON Tablets should not be given to pregnant women, women suspected of being pregnant and nursing women, unless the potential benefits outweigh the possible risks.
3. Medication to children
The safety of CEREKINON in children has not been established.

Handling

1. Caution: Dispense by physician's prescription
Keep out of reach of children.
2. Storage: Store in a light-resistant tight container below 30°C.
3. Expiry date: Indicated on the outer package.

How supplied

CEREKINON Tablets: 100 tablets (10 tablets × 10) P.T.P.

Further information is available on request.

Distributor:

WALETA SINGAPORE PTE LTD
63 Hillview Avenue #08-12
Lam Soon Industrial Building Singapore 2366
Tel : 7603833 (8 Lines) Fax : (65) 7625036
Tlx : RS 56043 WALETA

TANABE SEIYAKU CO., LTD.
2-10, Dosho-machi 3-chome, Chuo-ku, Osaka, Japan.

P-CEK-893 (H)

SYNCOPE IN THE ELDERLY - AN APPROACH

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SUMMARY

Syncope is a serious problem among the elderly. Its causes may be life-threatening, and syncope itself leads to high morbidity. A systematic approach is outlined. In spite of extensive tests, diagnosis is establised in only 40 to 50% of patients.

Keywords:

Syncope, Cardiac, Neurologic

Syncope is a common, yet serious problem among the elderly, and has a yearly incidence of 6% and a recurrence rate of 30% in an institutionalized geriatric population[1]. Extensive procedural tests and hospitalization will establish the diagnosis in only 40-50% of patients. Therefore, a systematic evaluation of syncope is required.

The goals are to discover correctable causes and recognise atypical presentations of treatable disease, avoiding expensive inpatient evaluations that are not specific to the patient's immediate needs.

DEFINITION

Syncope is defined as a loss of consciousness due to temporary insufficiency of cerebral blood flow[2]. It is different from other causes of loss of consciousness like seizures, in which the aetiology of loss of consciousness is electrical in nature.

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The three main categories of causes of syncope are:

1. blood pressure disorder,
2. cardiac disorder, and
3. neurologic disorder.

1. Blood Pressure Disorders:

(i) *Vasovagal Syncope.* A typical history is very important, and should include the following[3]:

a. Any known precipitating cause like fear, fatigue, heat, crowding, or hunger.

b. any prodromal symptoms lasting seconds to minutes, which may include weakness, diaphoresis, blurred vision, decreased hearing, nausea, and abdominal discomfort.

c. Any symptoms which occur while the

patient is standing or sitting, but are relieved by lying down.

d. How was the patient during the attack? Was the patient pale and sweaty, and did he have tonic-clonic movements or urinary incontinence?

e. How was the patient after the attack? Was the patient alert and orientated within a few minutes and did he have any residual symptoms?

(ii) *Orthostatic Hypotension.* This is caused by a significant postural drop in blood pressure as a result of change of gravitational pooling of blood.

(iii) *Carotid Sinus Hypersensitivity.* This is diagnosed by a blood pressure decrease of at least 50mmHg or by asystole for more than 3 seconds when the carotid sinus is carefully massaged under ECG monitoring. This procedure is generally well tolerated, but the physician should be prepared, with adequate backup, to manage the rare complications of prolonged asystole, complete heart block, or cerebral ischemia that may ensue.

(iv) *Situational Syncope.* Micurition, defecation, cough or swallowing

2. Cardiac Disorders:

(i) Cardiomyopathy or CCF
(ii) Myocardial ischemia or infarct
(iii) Pulmonary embolism
(iv) Aortic stenosis
(v) Arrhythmias
(vi) Sick Sinus Syndrome

3. Neurologic Disorders:

(i) Seizures
(ii) Vascular insufficiency

Table 1 shows the differential diagnostic guide to syncope, while Table 2 illlustrates the differences between syncope and epilepsy as causes of loss of consciousness.

Table 1: DIFFERENTIAL DIAGNOSTIC GUIDE TO SYNCOPE[4]:

History and Physical Findings	Probable Cause of Syncope
Nausea, diaphoresis, anxiety, fear	Vasovagal reaction or Cardiac ischaemia
Loss of consciousness with no warning	Cardiac arrhythmias
Acute illness accompanied by vomiting, diarrhoea, poor oral intake	Volume depletion, Hypotension
Neck turning followed by syncope	Hyperactive carotid sinus or Vertebral artery compression by osteophyte.
Exertion-induced syncope	Aortic stenosis, Hypertrophic cardiomyopathy, Pulmonary hypertension
Prolonged confusion or focal neurologic deficit after awakening	Seizure, TIA
Hypotension and Bradycardia	Carotid sinus syndrome, Vasovagal syncope, Sick Sinus Syndrome.

Table 2: DIFFERENCES BETWEEN VASOVAGAL SYNCOPE AND EPILEPSY:

Vasovagal syncope	Epilepsy
sudden onset	has prodromal symptoms
onset can be recalled	has retrograde amnesia
unusual to have tongue biting	tongue biting common
often continent	usually incontinent
rapid recovery	slow recovery with confusion

LABORATORY EVALUATION OF SYNCOPE:

1. FBC, Urea, Creatinine, Electrolytes, Sugar
2. Drug levels, eg. digoxin, theophylline
3. ECG

   ECG in syncope is of utmost importance as it often indicates to a certain extent if the syncope is life-threatening or not:

   1. LVH, Q waves
   2. Raised ST segments — LV aneurysms
   3. ST-T waves — non-Q infarcts, ischaemia
   4. BBB — ? marker for higher degrees of AV block
   5. Complete Heart Block (CHB) — Stokes-Adams syncope
   6. Short PR interval — WPW, Tachyarrhythmias
   7. Brady or Tachy arrhythmias — SA nodal disease

4. Cardiac enzymes
5. Blood gases
6. Echocardiogram
7. EEG, CT Scan brain
8. Holter monitoring

When do we admit patients with syncope for further evaluation?

1. Multiple episodes
2. Those living alone
3. Initial evaluation indicates that there is serious underlying condition

TREATMENT:

The aim of management is to treat the correctable causes and to prevent recurrences. They include:

1. treat postural hypotension
2. avoid drug induced syncope
3. correct hypoxemia
4. Physical changes - sitting while urinating for male patients with micturition syncope or avoiding tight collars or extreme neck rotation in patients with carotid sinus syndrome.
5. Empiric antiarrhythmic therapy is not routinely indicated in patients with arrhythmias not correlated with symptoms; these can be toxic in the elderly, and their efficacy in prolonging life or preventing recurrent syncope is unproven.
6. Pacemakers can be implanted safely in older patients, and are indicated for CHB or symptoms of bradyarrhythmias from irreversible causes.

THE APPROACH

In summary, the approach to syncope[5] would be:

From History And Examination, Determine:

1. Cardiac or 2. Non Cardiac

CARDIAC:

Anatomical/Mechanical problem? — AS, HOCM, Pulmonary hypertension, CCF, AMI.

Rhythm and Conduction problem? — SSS, High-degree heart block. Prolonged QT syndrome due to drugs.

Where ECG and Holter monitoring are both normal, other expensive tests are likely to be fruitless.

NON-CARDIAC:

Blood pressure problem? Hypovolemic?

Insufficient vasomotor tone? — orthostatic hypotension, vasovagal syncope, carotid sinus syndrome, defecation, micturition, cough syncope?

Drug-induced — hypotension, overdose.

Cerebral disease:— VBI, Seizure, Haemorrhage?

Where There Is Still An Unexplained Syncope After Extensive Investigations, a head-up tilt test should be done:

Prolonged orthostatic stress testing using 60 degrees head-up tilt may induce vasovagal syncope and diagnose malignant vasovagal syncope. This requires the patient to maintain the head-up tilt position for about 45 minutes according to the Westminister protocol. With this procedure, Fitpatrick and Sutton[6] were able to pick up 75% syncope at 24 minutes duration.

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HORMONE REPLACEMENT THERAPY: THE RISKS AND BENEFITS

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INTRODUCTION

The Traditional chauvinist medical attitude that the symptoms and treatment of the menopause should be ignored is fast disappearing. The menopause is now viewed as an endocrine deficiency disease with serious consequences for many women. The sequelae of this disease are being exacerbated as women are living longer but their quality of life is being reduced. The modern management of the menopause represents a revolution in attitude, knowledge and care. However, no form of medical treatment is without some element of risk, and the decision to prescribe for any individual should be based on an assessment of the known benefits and potential risks.

RELIEF OF OESTROGEN-DEFICIENCY SYMPTOMS

Of immediate concern to the menopausal women are the often debilitating symptoms that include vasomotor, atrophic, psychological and sexual symptoms. With an adequate dose of oestrogen most of these oestrogen-deficiency symptoms will be ameliorated within a few weeks of the commencement of therapy.

Relief of vasomotor symptoms such as hot flushes and night sweats is almost immediate although the full effect is not seen for 2-3 months. Improved sleep and mood are apparent at this stage.

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The relief of atrophic changes is more intermediate in response. Vaginal lubrication improves rapidly and the vaginal epithelium is restored to normal over a few weeks. This usually leads to improved sexual function. The symptoms of nocturia, urgency and recurrent cystitis require several months' therapy before an improved is noticed. With ageing, skin changes associated with the loss of collagen can be halted and some collagen can be regained. However, the collagen level reaches a plateau, demonstrating that hormone replacement therapy (HRT) will not return the skin of an older woman to that of a young girl!

There is debate about psychological symptoms such as depression, irritability and lethergy. Although oestrogen can improve these symptoms more effectively than placebo, this can be the result of improved sleep after the relief of night sweats.

Disturbances of sexual function, although often attributed to atrophic changes in the past, have been shown to be partly due to decreased libido. Although libido may improve with oestrogen therapy alone, the conjunctive use of testosterone may be required.

PREVENTION OF OSTEOPOROSIS AND FRACTURES

Osteoporosis is now recognised worldwide as a major health care problem involving considerable morbidity, mortality and cost. Although it is difficult to reverse osteoporosis once it is established, there is evidence to show that oestrogen replacement therapy used in the first 5

to 10 years of the menopause prevents the rapid postmenopausal phase of bone loss and is therefore preventive for the development of osteoporosis and subsequent fractures. Furthermore, although adequate calcium intake and exercise are both beneficial in slowing the rate of osteoporosis, oestrogen therapy is the only prophylactic measure available to reduce, the frequency of fractures associated with osteoporosis.

Bone mass loss proceeds rapidly after the menopause, and therefore any proposed treatment should be instituted without delay, but because of the possible harmful effects of HRT it would be of benefit if women who are at risk of osteoporotic fractures could be predicted. Unfortunately while there are many described methods of noninvasive testing for osteoporosis, there is no agreement as to which method is suitable for the screening of large numbers of women. The selection of which women to treat is at present based largely on assessment of the known risk factors for increased osteoporosis such as premature menopause, underweight, nulliparous, lack of exercise, excessive alcohol consumption, cigarette smoking, high caffeine intake, low calcium intake, corticosteroid therapy and family history. As a rule of thumb, a woman with three or more of any of these risk factors should be considered for long term-hormone replacement and calcium therapy.

CARDIOVASCULAR DISEASE

Oestrogen therapy is associated with a 50% reduction of coronary heart disease in postmenopausal women. Not only does it have a beneficial effect on the circulating blood lipid fractions (reduction in plasma LDL and increase in HDL) but it is now established that oestrogen has a positive influence in preventing the deposit of cholesterol in the arterial endothelium. Although progestogens may reverse some of the positive lipid values, they do not appear to prevent the protective activity of oestrogen on the arterial endothelium or the cardiovascular musculature.

Oestrogen therapy in postmenopausal women also induces vasodilation, increases peripheral blood flow and leads to a fall in blood pressure. There is also evidence that it reduces thrombogenic activity. The overall risk of stroke seems to be reduced by about 30%.

CANCER

The current evidence about cancer and HRT shows a reduction in endometrial and large bowel cancer when HRT is appropriately prescribed. There is no increase in other cancers, except perhaps breast cancer.

Unopposed oestrogen therapy, over many years, is associated with approximately a fourfold increase in **endometrial carcinoma**. Although these tumours are well differentiated, slow growing and are generally amenable to cure by hysterectomy, long-term unopposed medium or high dose oestrogen therapy should not be given to women with a uterus. A progestogen given cyclically for 12 days in appropriate dosage appears to overcome this problem by inducing secretory changes in the endometrium and endometrial breakdown on its withdrawal if there has been any endometrial stimulation by the oestrogen. Appropriate addition of a progestogen actually decreases the incidence of endometrial carcinoma compared with women not receiving HRT. Endometrial sampling (curretage) of women receiving combined regimens is now considered to be unnecessary.

Although most studies show no increase in **breast cancer**, a few suggest a possible rise with high dose or long-term oestrogen therapy. These statistical associations in a few studies should not be misinterpreted as showing cause and effect. No study has shown that hormones initiate breast cancer. Theoretically, breast cancer that is present could be potentiated. This concern is not supported by recent data that show women who develop breast cancer have a poorer prognosis if they are not on HRT, compared with those who develop it while taking HRT. In the worst scenario, there would be an increase mortality from breast cancer of 38 per 100,000 women among oestrogen users. Among those women, however, there would be fewer deaths from heart disease, stroke and osteoporotic fractures. Breast cancer is an important and emotive disease for many women and although the risk-benefit ratio is clearly in favour of long-term HRT, each woman should make up her own mind based on comprehensive information.

GALLBLADDER DISEASE

The composition of bile is altered by oral oestrogen therapy and this route of administration should be used with caution in women who may be predisposed to gallbladder disease. Implants or skin patches may be more suitable.

FIBROIDS AND ENDOMETRIOSIS

After the menopause, fibroids and endometriosis tend to regress and it is unusual for HRT to cause their redevelopment. Regular monitoring of uterine size by pelvic examination will identify any increase in fibroids and pain due to this or endometriosis may be an indication to stop therapy.

CONCLUSION

HRT can play a major beneficial role in menopausal women. The use of HRT after the menopause carries some risks, with a probable increased incidence of breast cancer being the most important. However, the benefits in the improved quality of life, together with a substantial reduction in mortality from osteoprosis, ischaemic heart disease and stroke, are far greater and should encourage the wider use of this therapy as preventive medicine. The best person to manage the menopause is the informed family practitioner who can counsel about all aspects of this stage of life. Women requiring a second and more specialised opinion can be referred.

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Multiple Choice Questions

1. Symptoms typically associated with oestrogen deficiency during the climateric include

   A hot flushes
   B night sweats
   C urogenital disorders
   D decrease libido
   E depression

2. Clinical risk factors for osteoporosis include

   A thin build
   B smoker
   C little exercise
   D late menopause
   E excessive alcohol consumption

3. With regard to HRT the following statements are true

   A menopausal symptoms particularly hot flushes and night sweats respond quickly.
   B the risk fo developing endometrial cancer increases in women receiving combined oestrogen — progesterone therapy.
   C it is currently the only well established prophylactic measure that reduces the frequency of osteoporotic fractures.
   D it substantially increases the incidence of stroke.
   E there is a significant reduction in coronary heart disease.

Answers:
1. A B C D E
2. A B C E
3. A C E

ECG QUIZ

Contributed by Dr Baldev Singh,
MBBS (S'pore), M. Med (Int. Med), MRCP (UK), FRCP (Glasgow), Assc. FACC.

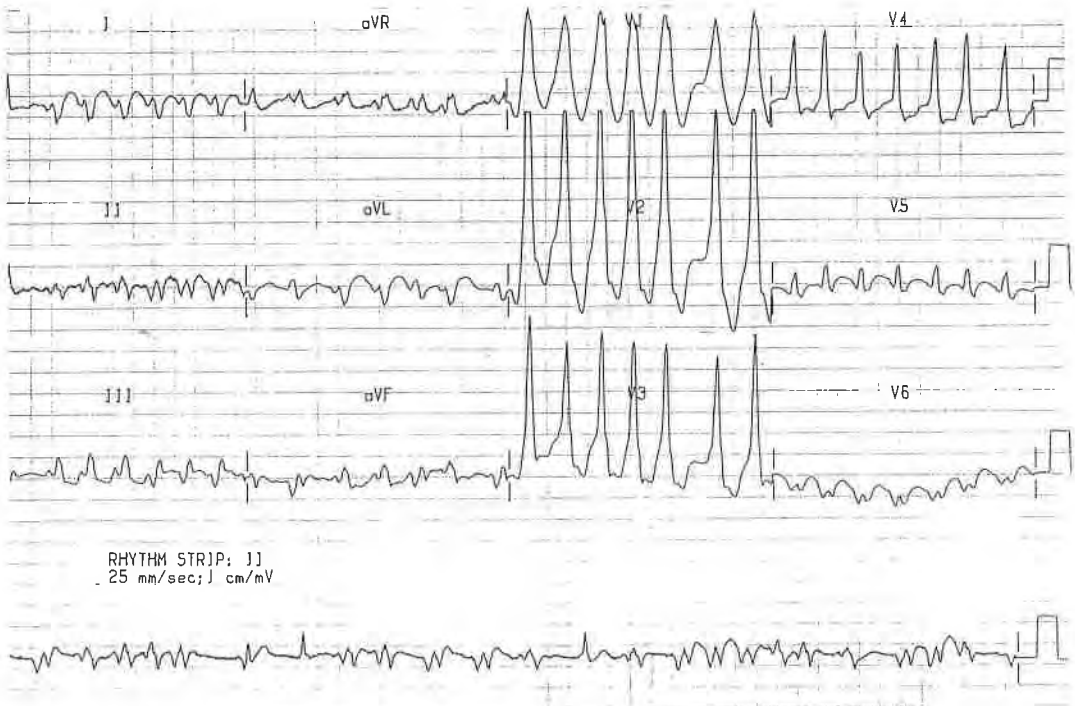
The ECG shown below belongs to a 49-year-old Indian male who has been known to have Wolff-Parkinson-White syndrome.

He complained of palpitation but despite having such a rhythm, he looked well, could walk slowly, sit up and have a meal.

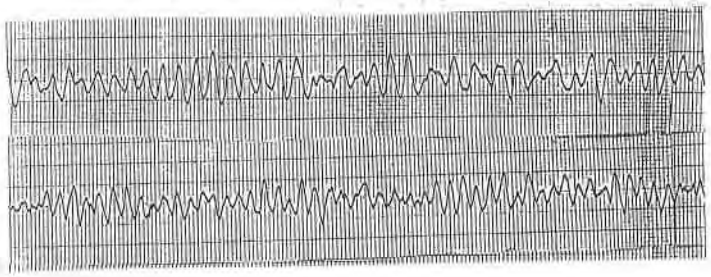
A few hours later while being monitored in the ICU, his rhythm changed (Strip 2).

What is your diagnosis of both ECGs and what would be your management?

Strip 1



Strip 2



Answers on next page

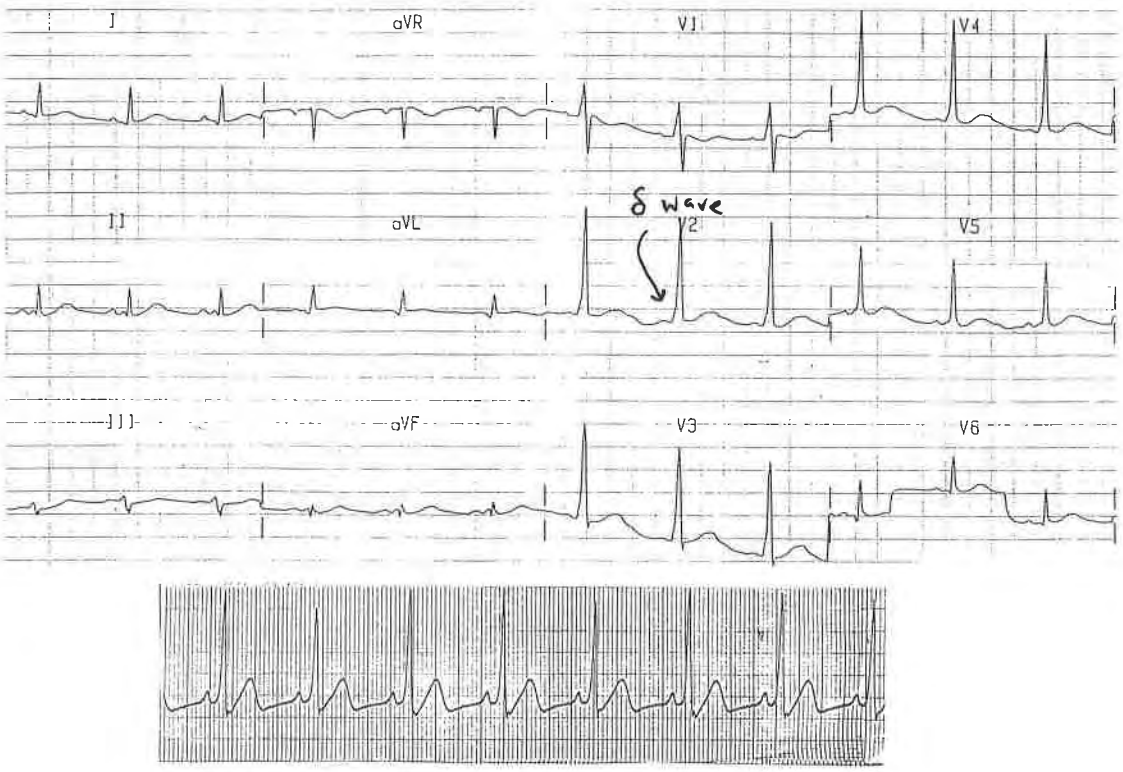
ANSWERS TO ECG

The ECG shows very bizarre complexes with irregular RR intervals. This is a case of WPW having gone into atrial fibrillation.

The patient was monitored in the ICU and started on IV Amiodarone infusion. Digoxin is contraindicated in such a situation as it will depress the A-V node and will perpetuate the rapid flow of impulses down the bypass tract. This can precipitate ventricular fibrillation. This is exactly what happed in this patient and a few hours later despite being on amiodarone he went into ventricular fibrillation and lost consciousness.

Fortunately preparations had been made for the remote possibility of such an event and when this happed he was promptly defibrillated with 200 volts to the chest from a bedside defibrillator. The ECG below is a post defibrillation recording.

The patient has been scheduled for electrophysiological studies and possible radiofrequency catheter ablation of the bypass tract.



WORLD HEALTH ORGANIZATION PUBLICATIONS

NEW BOOK ANNOUNCEMENTS

SURGERY AT THE DISTRICT HOSPITAL: OBSTETRICS, GYNAECOLOGY, ORTHOPAEDICS, AND TRAUMATOLOGY

Edited by J. Cook, B. Sankaran, and A.E.O. Wasunna
Illustrated by D. Atherton, E. Sacco, and P. Virolle
1991, 207 pages ISBN 92 4 154413 9

This book provides an illustrated guide to a limited number of essential surgical procedures for treating the major complications of pregnancy and childbirth (and for preventing material deaths) and for managing traumatic injuries, including fractures, dislocations, bone and joint infections and burns. Gynaecological procedures commonly required in small hospitals are also covered. Throughout the book, emphasis is placed on standard surgical protocols that represent the safest line of action in hospital settings where equipment may be primitive, drugs limited, and specialist services sparse.

The book completes a series of three handbooks (the other two cover General Surgery and Anaesthesia) designed to extend the competence of the general duty doctor who works in a small hospital, is called upon to treat a range of conditions an emergencies, and yet is constrained by limited training, equipment and drugs. Procedures were selected for inclusion on the basis of their capacity to save lives, alleviate pain, prevent the development of serious complications, or stabilize a patient's condition pending referral. In producing these manuals, the World Health Organization aims to help doctors acquire a repertoire of standard, vital techniques that are simple and safe, yet in line with the highest level of scientific knowledge.

TOWARDS A HEALTHY DISTRICT: ORGANISING AND MANAGING DISTRICT HEALTH SYSTEMS BASED ON PRIMARY HEALTH CARE

By E. Tarimo 1991, v + 105 pages ISBN 92 4 154412 0

This book provides a practical, step-by-step guide to the ways in which better planning and management can be used to improve the services of district health systems, Firmly rooted in practical experience, the book adopts a problem-oriented approach, stressing plans and actions that respond to everyday problems and fall within the reach of the district health team. The objective is to help managers and other personnel in developing countries anticipate problems, avoid common pitfalls, use the right planning tools, make wise choices, and keep ambitions in line with the realities of needs and resources. To this end, the book makes abundant use of practical examples, case histories, checklists, and photographs to give concrete meaning to the rich advice provided.

The book features nine chapters focused on each of the main stages in the planning cycle, moving from analysis of the present situation to the implementation of specific measures and the monitoring of their effectiveness.

The most extensive chapters concentrate on action, outlining measures that can be taken to improve health services, encourage joint action with the community and with other service sectors, and facilitate the smooth implementation of improvements.

The remaining chapters cover monitoring and control, including the use of tracer diseases and sentinel sites, and offer tips and advice for evaluating interventions and for making the most out of lessons learned from experience.

COMMUNITY INVOLVEMENT IN HEALTH DEVELOPMENT: CHALLENGING HEALTH SERVICES

Report of a WHO Study Group

Technical Report Series, No. 809, 1991, 56 pages ISBN 92 4 120809 0

This book explores what can be done to move the widely-endorsed concept of community involvement in health from rhetoric to a functional reality. Noting that community involvement is often regarded as an expedient for gaining voluntary contributions of labour and resources, the book challenges health authorities and personnel to appreciate the magnitude of changes–from a shift in the fundamental goals of development projects to rethinking of the conventional provider-recipient model of health care–needed to establish the kind of partnership with communities that leads to sustained improvements in health. Throughout, emphasis is placed on the distinction between merely seeking local support for a preconceived programme and the type of project that involves the people from the outset, empowers them to act as advocates for their own health needs, and thus creates a basis for continuing participation.

In the first section of the book, critical factors that will influence the implementation of community involvement are identified and discussed. The second section considers the components of a coherent strategy for putting the concept into practice.

Other sections discuss the changes in educational programmes required to equip personnel to collaborate with communities and outline the essential health services needed to support and sustain community initiatives.

GUIDELINES FOR AUTHORS THE SINGAPORE FAMILY PHYSICIAN

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.

The following types of articles may be suitable for publication: case reports, original research work, audits of patient care, protocols for patient or practice management and review articles.

PRESENTATION OF THE MANUSCRIPT

The whole paper

* 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.
     Headings and subheadings may be used in the text. Indicate the former by capitals, the latter in upper and lower case underlined.

     Arrange the manuscript in this order: (1) title page, (2) summary, (3) text, (4) references (5) tables, and (6) illustrations.

* Send three copies of all elements of the article: summary, text, references, tables and illustrations. The author should retain a personal copy.

The title page

* The title should be short and clear.
* Include on the title page first name, qualifications, present appointments, type and place of practice of each contributor.
* Include name, address and telephone number of the author to whom correspondence should be sent.
* Insert at the bottom: name and address of institution from which the work originated.

The summary

* The summary should describe why the article was written and give the main argument or findings.
* Limit words as follows: 100 words for major articles; 50 words for case reports.
* Add at end of summary: an alphabet listing of up to 8 keywords which are useful for article indexing and retrieval.

The text

The text should have the following sequence:

* Introduction: State clearly the purpose of the article.
* Materials and methods: Describe the selection of the subjects clearly. Give references to established methods, including statistical methods; provide references and brief descriptions of methods that have been published but are not well known. Describe new or substantially modified methods, giving reasons for using them and evaluate their limitations. Include numbers of observations and the statistical significance of the findings were appropriate.

  Drugs must be referred to generically; all the usual trade names may be included in parentheses. Dosages should be quoted in metric units.

  Laboratory values should be in SI units with traditional unit in parentheses.

Do not use patient's names, initials or hospital numbers.

* Results: Present results in logical sequence in the text, tables and illustrations.

* Discussions: Emphasise the new nad important aspects of the research and the conclusions that follow from them. Indicate the implications of the findings and limitations. Relate the observations to other relevant studies.

Illustrations

* Diagrams, line drawings, photographs or flow charts are valuable but their use will be subject to editorial policy. Transparencies or prints are acceptable for colour reproduction at the authors' expense.

* Each illustration must carry its appropriate Figure number and the tip should be clearly labelled.

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Place these at the end of the text, before references.

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These should be limited to the work cited in the article.

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Authors are responsible for accuracy of references, which should conform to the Vancouver style (see Further reading). List all authors (include all initials) when there are six or fewer; when seven or more list the first three and add et al. Give the title of the paper cited in full, the title of the journal abbreviated according to Index Medicus (if not listed by Index Medicus spell in full); the year; the volume number and the first and last page number of the article.

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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 J C and Mosteller F. Guidelines for Statistical Reporting in Articles for Medical Journalsl Ann Intern Med 1988; 108: 266-273.

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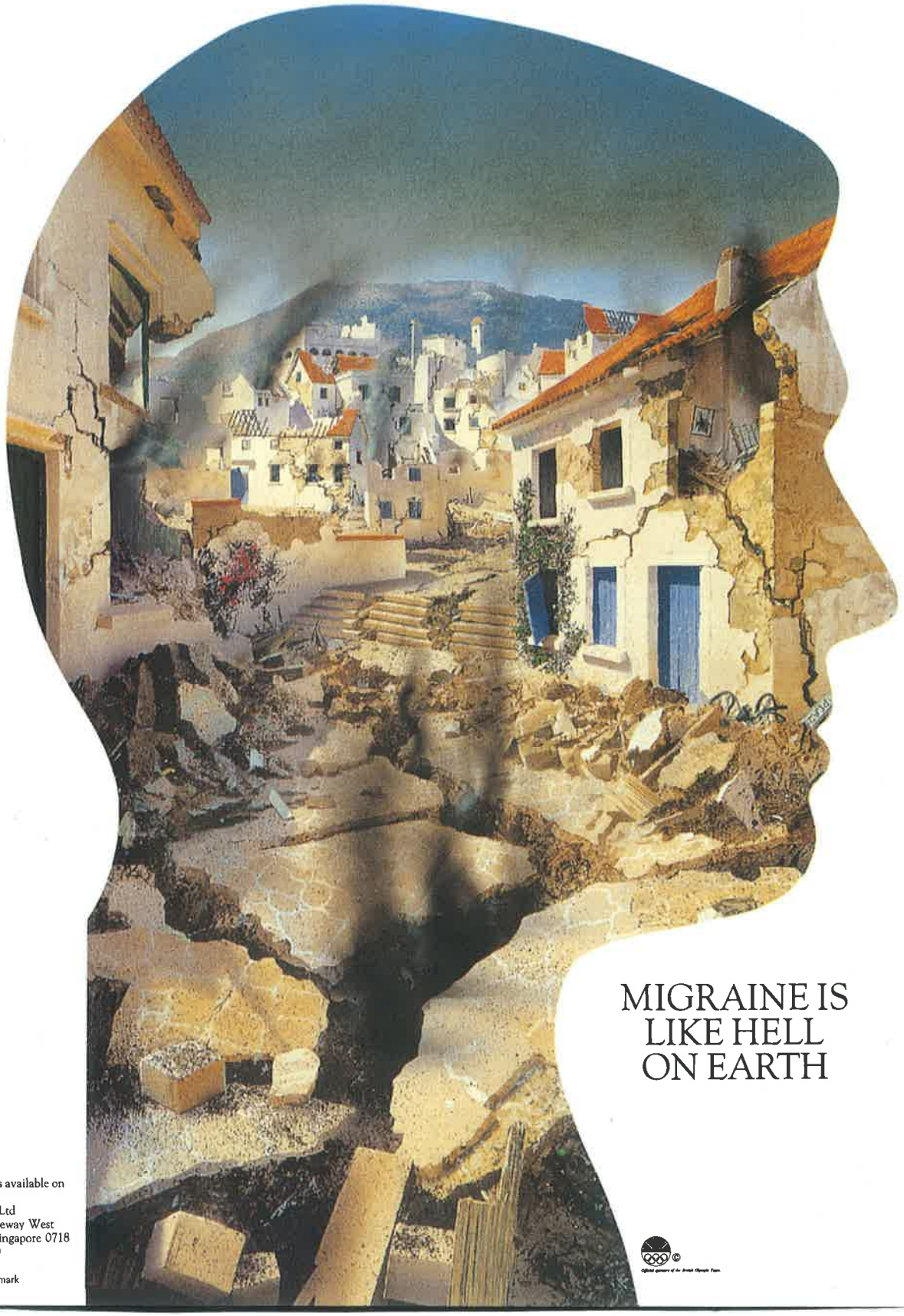

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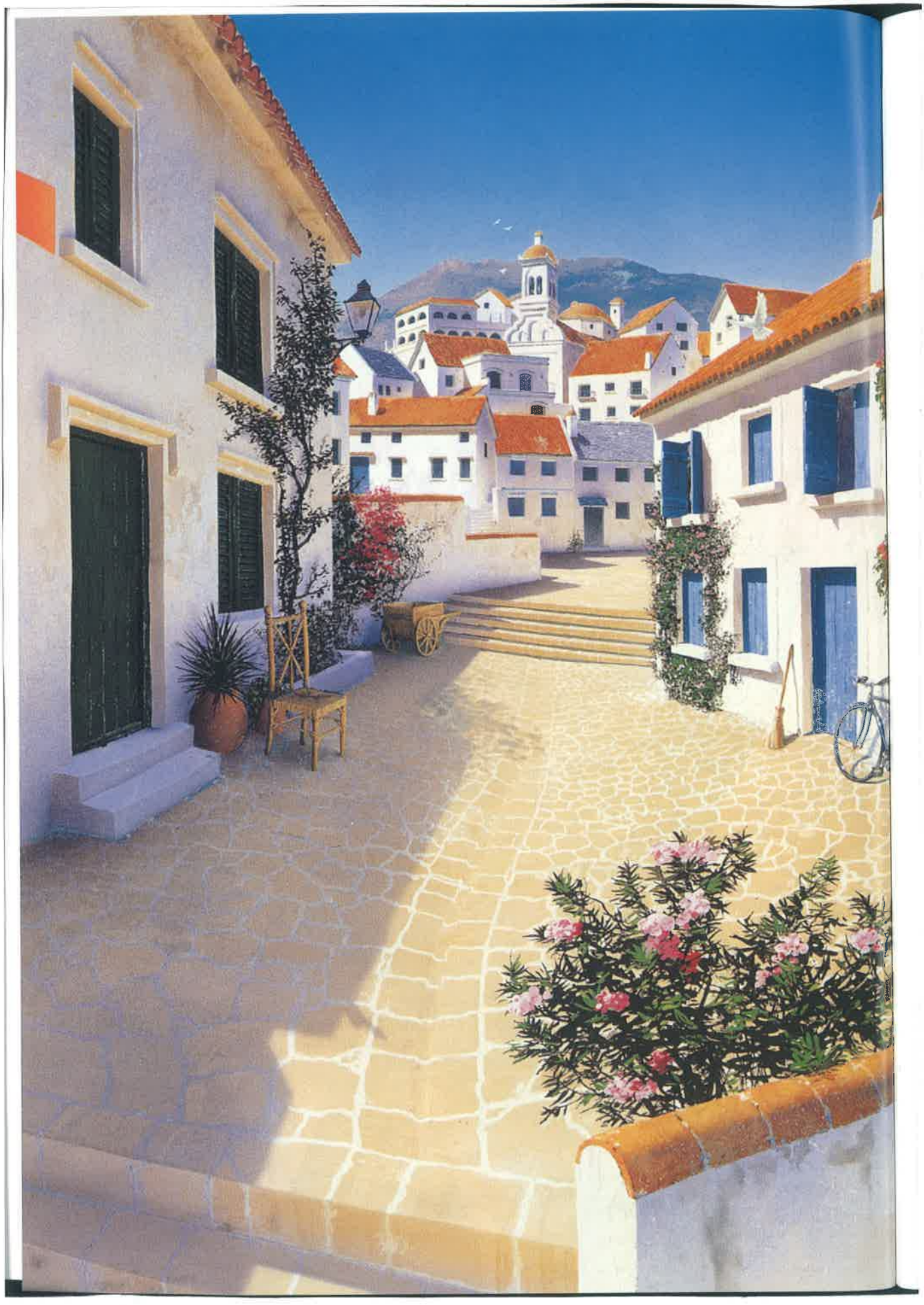

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