The Singapore Family Physician

The College of General Practitioners Singapore
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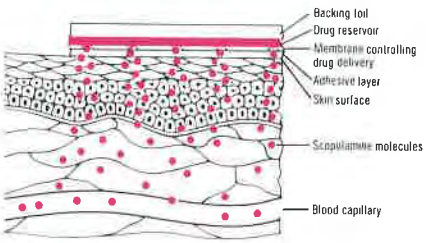

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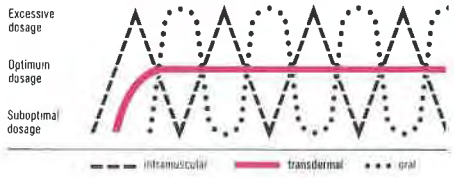

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*Bengtsson, C., et al: Clinical Therapeutics, Vol. 2, No. 2, 1979

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CONTENTS

An update

®VOLTAREN INJECTION

is more than just a good antirheumatic

IN RENAL COLIC

A comparison with morphine/spasmolytic combination

Voltaren injection

- significantly more effective and has fewer side effects[1]
- no risk of addiction

Efficacy

Partial or complete relief of pain within 30 minutes of injection[1]

Voltaren Injection — % of patient — 91%

Morphine/Spasmolytic — % of patient — 62%

IN TRAUMATIC PAIN

A comparison with dipyrone

Voltaren injection

- as effective as dipyrone but significantly better tolerated[2]
- has no effect on the organs of haemopoiesis[3]

Efficacy

Severity of pain before and after treatment[2]

Percentage of patient in V (Voltaren Group) and D (Dipyrone Group)	Before treatment V	Before treatment D	After 30 min. V	After 30 min. D	After 4 hrs. V	After 4 hrs. D
No pain			3	8	46	50
Slight			26	27	37	36
Moderate	17	21	40	38	14	12
Severe	52	48	25	21	2	2
Very Severe	31	31	6	6	1	—

1 Sven O A Lundstam, Lars A Wahlander, Karl-Henrik Leissner, John G Kral. Prostaglandin synthetase inhibition with diclofenac sodium in treatment of renal colic: comparison with use of a narcotic analgesic. The Lancet. May 15 1982 1096-97

2 A Folha Med. 79 (5) 371-76, Nov. 1979: A comparison of the analgesic activity of diclofenac sodium with that of dipyrone in pain following trauma

3 Miura, T. Long term tolerability study of diclofenac sodium. J. Int. Med Res. 3 145 (1975)

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EDITORIAL

TECHNOLOGICAL CHANGES AND GENERAL PRACTICE

What are the foreseeable technological changes that may affect the future General Practice? Several can be identified as the result of advances in equipment technology and information technology.

Advances in equipment technology

Miniaturisation has made it possible to bring sophisticated equipment to the consulting room and the home. Several have already made their appearance. The blood glucose meter is one example. It has made monitoring of diabetic control more accurate and rapid. The bare 120 seconds needed to get a result means that decision making can be greatly speeded up: should the dose of the oral hypoglycemics be stepped up or not. Previously, one had to wait a day or two for routine results to come from the laboratory. Diagnosis of diabetic keto-acidosis or hypoglycaemia can be confirmed biochemically on the spot.

The portable oxygen supply and bronchodilator nebuliser have made it possible to manage chronic bronchitics at home. The portable nebuliser in particular has revolutionalised the delivery of bronchodilators in acute asthmatic attack. Gone is the need to deliver adrenaline subcutaneously to abort an attack; aerosol salbutamol (ventolin) or terbutaline (bricanyl) through the portable nebuliser has replaced that, to the greater comfort of the patient.

Twenty-hour ambulatory ECG monitoring of cardiac arrythmias is now possible and although the average General Practitioner may not use it, he may encounter this in patients jointly managed by the cardiologist and him.

In the hospital, sophisticated equipment that allow non-invasive examination of seats of disease have made their appearance. Examples are computerised axial tomography, ultrasonography, echography, endoscopy and NMR. Whilst these can be useful, the investigations are costly so that their use must justify the expenditure. Increasingly, more patients will want to discuss with their family doctors what is the expected yield of such investigations and whether simpler invetigations will suffice.

Then there are sophisticated treatment modalities like lithotriptsy and laser surgery. The place of these advances in our treatment armamentarium again has to be evaluated. Otherwise, we would not be able to comment intelligently when asked by our patients.

Advances in information technology

Miniaturisation and the introduction of powerful computer chips have reduced room sized computer equipment and larger to desktop models. Fast speed and reliable modems now make it possible to convey large quantities of information quickly and accurately through long distances via telephone and other links. Fascimile machines (fax machines) have made it possible to send exact copies of text or graphic material over long distances. To complete the information technology advance, there is now the laser printer that churns a hardcopy of computer output at the rate of one page a second. The output is so good as to look like that coming out of a printing press. Desktop publishing, the computer jargon for such innovation, has arrived.

These advances confer quantum leaps to information dissemination. The Joint Reference Medical Library in the College of Medicine Building (COMB) has taken in its strides these information technology advances. It will have computer links with international medical databases and fax machines. These will make it easier for doctors to have access to medical information to keep themselves informed.

The use of the modem has made it possible for clinics to relay medical information necessary for decision making between the referring and referred doctor, receive results of investigations from medical laboratories, X-ray clinics, medical clinics and hospitals more quickly than ever before. Already one reads of foetal heart monitor signals from at-risk pregnancies being relayed from home to the attending doctor in a UK hospital.

Computers may also be pressed into service in clinics to do some of the jobs now done manually, as for example, labelling of presribed medicines, simple invoicing and billing of account patients, and patient recall. Also databases of information useful to the doctor can also be stored on computer for rapid retrieval. The computer too may have a place for patient health education. A piece of software called PC-Storyboard appears promising.

Contrary to what has been promoted, computer use will not reduce staff numbers but allow them to do more things and do them more quickly, that is, staff can be made more productive. Thus clinic staff need not feel apprehensive when their doctors talk of computerisation. They need not be retrenched although they may need to be retrained.

For doctors, computers can be programmed to assist in diagnosis checking and computer aided learning. Softwares for developing such programmes on the IBM XT microcomputer are now available in the market. An example of a software for such applications that is now available in the market is PROLOG. There are already packages for CME learning by computer; one such package is that available on subscription from the Scientific American. Then there are journals that have electronic versions on diskette. The Lancet is one such journal.

However, for all these advances to come to the clinic and the average non-computer hobbyist doctor, the necessary infrastructure will have to be created. This infrastructure includes not only computer hardware and software but also the knowhow of man-machine linke up between computers and users. These users will include not only nurses and paramedical staff but also the doctor, many of whom currently still fight shy of the computer.

What separates these apparently exciting possibilities and reality are software packages that are simple to use and not too costly as well as facilities for software support and user training. The formation of a IT Application Committee by the National Computer Board is a step in the right direction. The Singapore Medical Association is represented on this Committee.

Towards this direction also, the College of GP has in the physical plans of COMB a computer training room which will be equipped with half a dozen 16 bit micro-computers. These machines could form a start in the conduct of computer appreciation courses as well as R & D into computer use in the clinic.

The Impact of Information technology on Patients

Medical information is now easily available and patients can have easy access to it. He can get it from newspapers, books and the many electronic bulletin boards, including the one run by the Singapore Medical Association (SMA-BBS). Family doctors are therefore likely to be asked by their patients to comment on what their patients have read about various medical conditions and treatment options.

Doctors must therefore move from an authoritarian style of telling the patient what to do, to a more participative style where the patient has a say about what options he would like to take.

What will not change

In the midst of changes, it is pertinent to ask what will not change. The following passage provides some food for thought and some assurance to those resistant to change. It is taken from Occasional Paper 30 (1985) of the Royal College of General Practitioners, UK:

"Technology changes but human needs and emotions remain the same. The general practitioner of the future will always need to be able to cope with patients' fears, bereavement and terminal illness. The essential consultation skills will not change, merely the subject matter to which everyone will have access."

GLG

ADDRESS

CONVOCATION ADDRESS

Dr Lee Suan Yew

Mr Pro-Chancellor, Graduates, Ladies and Gentlemen.

I wish to thank the Vice-Chancellor for inviting me to address you at your convocation. It is indeed a great honour to share this joyous occasion with you. I would like to congratulate all of you for achieving the success you deserve. The sweat and tears were worth every drop.

Your parents should also be congratulated for nurturing you and for making great sacrifices to see you through University. Having graduated and having obtained a job which I hope you will, with a bit of luck, please do not forget and forsake your parents. Take good care of them now and in their old age. Hand them your first pay packet! They deserve the gesture of your love and gratitude.

Your professors and faculty staff should also be congratulated for training and moulding you into competent graduates, professional men and women in your respective fields. The National University of Singapore has achieved a good reputation in the Commonwealth and in the ASEAN region due to the great effort made by the Vice-Chancellor, members of the various faculties and the graduates who have brought fame to the University.

Teaching and learning processes are most important in the University. Feeding facts and figures alone are not good enough. Teaching you how to continue the process of learning is paramount. Hence, we have to continue learning all the time.

There is a Chinese saying told to me by a Scotsman: 'When you give fish to a student he will go hungry again. When you teach him how to fish he will never go hungry.'

However, I know that I was invited here not just to congratulate you and praise our University for the high achievements but to address ourselves to certain values which are not usually discussed in the lecture theatres. It is in situations such as this, while you are in high spirits that we need to remind ourselves of some of the important values we hope to inculcate in our people. Values such (1) integrity (2) dedication (3) professionalism (4) non-materialistic attitude and (5) service to our nation.

When you graduate and receive your degrees, remember that it is a certificate which indicates that you have achieved a course of training and have attained a level of examination results that allow you to practise in your field. Your professors and lecturers have as it were, prepared you to fly a glider. You have been taught the principles of gliding, the dangers and skills of gliding. Right now you are high up in the clouds and your teachers have just released the cable. You are now about to glide down safely to a niche where you would like to land. The world is at your feet. You chart your own course and you take your risk. Sometimes the weather is fine, sometimes it is stormy like a recession or an economic downturn and unemployment. It is frightening at times and yet exciting. By and large, you all land safely with very few casualties. And even casualties can be salvaged by good medical or surgical treatment!

I wish to share my thoughts with you over the five points I have just mentioned.

Integrity

Integrity cannot be measured, quantified or computerised. However, a discerning employer or colleague can fine tune and detect whether a person has integrity. Integrity plays

President, College of General Practitioners Singapore at the National University of Singapore Convocation on Saturday, 6 September 1986

a major role in our daily lives. You may not have a first class honours degree but if you are a person of integrity it is a 'plus factor'. Your employer or colleagues will respect you. Respect has to be earned and not bought. Its value is immeasurable. Hence, integrity must be ingrained in us. Every day of our professional work one's integrity is put to a test.

Dedication

In addition to having integrity, if you are dedicated in your field of work and you show tremedous interest and enthusiasm in your work, you will go far. When your effort and hard work is not measured against salary you have a formula which spells dedication and eventually success. A person who is dedicated to his profession or to his work is an asset to society.

Professionalism

However, dedication without expertise or 'professionalism' can be unproductive at times. We, in Singapore need to upgrade our professional skills and standard all the time in order to be competitive. We need men and women with vision and innovation. Hitherto, we are very good at duplicating and copying works done by more advanced countries. It is time we become more creative and adventurous. We should not fear experimental failures. Out of failures new and imaginative ideas are formulated. Asians generally dread experimental failures. The 'loss of face syndrome' must change. Many experimental failures become stepping stones towards future successes. We must try to achieve a high standard of professionalism. Research and continuing education are essential ingredients in our quest for maintaining a high standard.

Non-Materialistic Attitude

It is inevitable that in a well-structured commercial society like ours where we owe no one a living, materialism looms high and mighty. I would venture to say that once basic human needs, comfort and education have been attained, over-indulgence in the pursuit of material wealth for one's own glorification and gratification can be seen as vulgar and ultimately detrimental to the social fabric of one's society. Hence, in ancient civilisations, religion and its moral education acted as a counter-balance. Hence, the Ministry of Education's re-introduction of moral educatin and religion was timely. So, if your starting salary is smaller than your expectations, remember that attitude of being non-materialistic! Henry Fielding had this to say about being too materialistic: 'Make money your god and it will plague you like the devil!' A common observation in a materialistic society is that when one is young, health chases wealth. When one gets old, wealth chases health.

Let us not be hypocritical. Our nation needs high economic growth to succeed and to give employment to our people. What we should avoid is the ruthless pursuit of wealth without taking into account other good attributes that go to make a great people and a great nation.

Assuming that you inherited great wealth or achieved financial success through your professional work, you could give part of it back to society what you got out of it. There are numerous recepients awaiting for your generous cup that runneth over. You may start by giving to your University for example, the Community Chest and charitable organisations, and by supporting the fine arts.

The higher the economic ladder we reach the greater the support we should give to the artists, musicians, writers, dancers and actors. Wealth may come and go but culture permeates through generations. Wealth may bring power, prestige and greater comfort but a rich culture brings out refinement to the soul of our society. It inspires the people to achieve greater heights.

Service to our Nation

Many of you have already served our nation during your national service and many of you will soon be serving national service. Apart from national service, we may be called upon to serve our nation in other fields. Having benefited from a good education, a peaceful and orderly society, it is incumbent upon us to serve our nation. Some may be called upon to serve in high office, some in institutions of higher learning, in statutory boards or in charitable and professional organisations. When asked to serve please come forward and be counted.

Our nation needs bright and dedicated people like you. Our past and present leaders have set the example. They have sacrificed much and have dedicated themselves to serve and to build our island republic to what it is to-day. The torch will one day be handed over to you and we look forward to your contributions when your turn comes. With integrity, dedication, professionalism, a non-materialistic attitude and a sense of duty your contribution will be tremendous.

Let me conclude by saying how proud we are of your academic achievments. We congratulate you once again. Doors will be open. Some doors need a little push. Your professional world is just beginning. We wish you well in your future careers. May you be blessed with a good job, an undestanding spouse, a good marriage and a stable family. Previously, the equation was 1 + 1 = 4. I believe the latest demographic equation is 1 + 1 = 5 or 6. We have to keep on learning!

THE POWERFUL PLACEBO
A NEGLECTED ASSET IN MEDICINE

Dr T M Chong, *MBBS. (Malaya), MD. (Singapore)*

Hofling (1955) wrote in "The Place of Placebo in Medical Practice", "There is much misunderstanding among physicians about the definition of placebo. To some it seems to imply unethical procedures; they would rather think other doctors use placebos — not they. Yet, properly used, a good placebo has an important place in medical practice. What is a good placebo? Well, that depends on the physician, the patient and the patient's problem."

In fact placebos are more used than any other class of drugs. There are many occasions when an appropriately presented placebo will be less harmful and perhaps more beneficial than a complex and incompletely understood drug or medical procedure.

Definition of Placebo

The Shorter Oxford Dictionary defines "a placebo as a medicine given more to please than to benefit." But most will agree anything that pleases does good! Wolf (1950) defined a placebo effect as "Any effect attributable to a pill, potion, or procedure, but not to its pharmacodynamic or specific properties."

Historical — Prescientific Medical Treatment

The history of medical treatment for the most part until relatively recently is the history of the placebo effect, since almost all medications until recently were placebos, Shapiro (1959). No treatment of any specific value is found in the pages of Hippocrates and this remains true for over a thousand years according to Houston writing in 1938.

In ancient Egypt, according to the Ebers Papyrus, in 1500 B.C., patients were often treated with medication such as lizard's blood, crocodile dung, the teeth of swine, the hoof of an ass, putrid meat and fly specs, Findley (1953). In ancient Babylonia gastric complaints were treated by pouring burning juice of cassia over the patient, reported in the Lancet by Jastrow in 1913. Treatment by the royal touch was popular from 300 B.C. to the 19th century. It is well known that bleeding was a very common remedy for a multitude of conditions. Leeches were only one of the many methods that were used. In 1827 alone, 33,000,000 leeches were imported into France because domestic supplies were exhausted, Sigerist (1958). We read about a cure for gout in the 13th century consisting of oil of skinned puppy, vulture, goose, bear, fox, wax and seven other substances, Jastrow (1913). In the 17th century edition of the London Pharmacopeia we read about the use of worms, lozenges of dried vipers, powders of precious stones, oil of bricks, ants, wolves, spiders and earthworms, fur, feathers, hair, human perspiration, saliva of a fasting man, spider webs, wood lice, moss scraped from the skull of a victim of violent death, crabs' eyes and claws and human urine. Rapport and Wright (1952). We note prescriptions of "hotte horse" dung for ague, goose dung for baldness and sheep dung for gall stones in the 17th and 18th centuries, Castiglioni (1946). Despite these useless, abhorrent and often harmful drugs, and other bizarre substances, the physician continued to be a useful, respected and highly honoured member of society. Consider the treatment by the physicians of his day that Charles II endured: "A pint of blood was extracted from his right arm, and half pint from his left should, followed by an emetic, two physics, and an enema comprising 15 substances; the royal head was then shaved and a blister raised; then a sneezing powder, more emetics, and bleeding, soothing potions, a plaster of pitch and pigeon dung on his feet, potions containing 10 different substances, chiefly herbs, finally 40 drops of extract of human skull, and the application of bezoar stone; after which his majesty died", Van Dyke (1947).

Today we know that the effectiveness of these substances and medications was due to the placebo effect.

The Placebo Effect in Various Diseases

All treatment procedures can result in a placebo effect. The placebo response cannot be avoided; it applies at any part of a therapeutic encounter and its influence is seen in many diseases. For example, placebos provide relief in cases of angina pectoris, rheumatoid and degenerative arthritis, pain, hayfever, headache, cough, peptic ulcer, essential hypertension, etc. In a review of 15 studies, including 7 of his own, Beecher (1955) found that an average of 35.2% + 2.2% of 1,082 patients investigated benefited from placebo treatment. Reports of the placebo effects in the treatment of anxiety and depression have been prevalent. With placebo treatment in psychiatric patients, anxiety and tension decrease, depression is alleviated, and patients with schizophrenia respond positively. Improvement of up to 80% of schizophrenic patients has been found in response to the increased attention provided by a special research unit, Raskis & Smarr (1957).

Reported in the Annals of the Rheumatic Diseases, Traut and Passarelli (1957) in their study on "Placebos in the Treatment of Rheumatoid Arthritis and other Rheumatic Conditions" found that the number of rheumatic patients found to benefit from placebos is about the same as the number favourably influenced by any or all of the methods of therapy reported in other studies. They said the benefits from placebos in patients with rheumatoid arthritis resemble those obtained by placebos in degenerative arthritis. About 82% of patients improve — enough to justify the continuation of placebo administration. The number of patients who benefited did not seem to be essentially altered by resorting to salicylates or even to cortisone.

Aznar-Ramos et al (1969) in their study on the "Incidence of side effects with contraceptive placebo" found that there is no significant difference in the incidence of undesirable side effects, e.g. decreased libido, headache, pain and bloating in lower abdomen, dizziness, epigastric pain, etc. between their group with placebo and those reported by other authors with the administration of oral contraceptive steroids. Their findings suggest that they cannot attribute all the side effects to the medication but do not permit them to state that the use of oestrogens and progestrogens for contraceptive is free from adverse reactions.

Uhlenhuth et al (1959) in their double-blind study on "The Symptomatic Relief of Anxiety with meprobamate, phenobarbital and placebo" found that there were no significant differences in the effectiveness of the three agents.

Hillis (1952) reported in the Lancet in a careful study on inhibition of the cough reflex that he obtained an effect with placebos as great as that obtained with 0.03 gm. of codeine.

Park and Covi (1965) in their study on "Nonblind Placebo Trial: An Exploration of Neurotic Patients' Response to Placebo when its inert content is disclosed", have shown that unawareness of the inert nature of the placebo is not an indispensable condition for improvement on placebo. Their study involved 15 anxious, neurotic outpatients being placed on placebo treatment for one week after being informed the pills contained inert material. 14 patients took the pills and returned for the subsequent appointment, with all 14 reporting improvement; there was also overall marked improvement by doctor and patient ratings on several measurs. The primary finding is that patients can be willing to take placebo and can improve despite disclosure of the inert content of the pills.

From 1949 to 1953 hundreds of pounds of chlortetracycline (Aureomycin) were used "with success" to treat atypical primary pneumonia. Walker (1953) showed that chlortetracycline was no better than a placebo in this disease.

The high frequency of placebo response in angina pectoris has been well documented for more than three decades and has encompassed a broad range of therapeutic approaches. Many of these treatments are now known to have no specific physiologic effect. The following five abandoned treatments for angina: the xanthines, khellin, vitamin E, ligation of the internal mammary artery and implantation of this artery, are now believed to have no specific physiologic efficacy, yet at one time

all were found to be effective and were used extensively.

Xanthines. The methyl xanthines were believed to be coronary vasodilators, Smith, et al. (1935). Gilbert and Kerr (1929) considered the development of xanthines therapy for angina pectoris to be one of the most praiseworthy therapeutic attainments of the decade. These enthusiasts reported 76% of patients had favourable response, and Brown and Riseman (1937) showed that 80% of their patients benefited from a xanthine drug.

The physiologic inertness of xanthines as angina drugs was demonstrated in two clinical trials. Evans and Hoyle (1933) compared placebo pills to 13 different drugs used in the therapy of angina pectoris. They concluded in their 2½-year study, that, in general, placebo pills were the best therapy, since approximately 37% of the patients showed "moderate to great" improvement. Gold et al (1937) with 100 patients found theobromine to be no better than placebo.

Khellin, another vasodilator, was introduced for therapy of angina pectoris in the mid-1940's, Anrep et al (1949). These enthusiasts reported 90% of their patients showed a moderate to good response over three months to two years. Ayad (1948) reported in the Lancet that 83% of the patients underwent complete remission or marked improvement over a two to eight-month period. A series of reports followed, each of which detailed a favourable response in 70-80% of patients, Dewar and Grimson (1951), Osher et al (1951). However, Greiner et al (1950) concluded that khellin was no better than placebo pills for the prevention of pain for angina. Leiner and Dack (1953) confirmed Greiner's findings. By 1954 reports on the efficacy of khellin in the treatment of angina pectoris had disappeared from medical literature.

Vitamin E was introduced as a therapeutic agent for angina pectoris in 1946 by Shute and Vogelsang. Initial enthusiastic reports claimed 90% of patients benefited from Vitamin E therapy, Vogelsang and Shute (1946), Vogelsang et al (1947), Shute et al (1947). However, subsequent studies failed to find any therapeutic efficacy in Vitamin E and by 1953 Vitamin E therapy had fallen into disrepute, Uricchio and Calenda (1953). Two large, well controlled trials subsequently showed Vitamin E to be no better than placebo pills, Anderson (1974), Gillilan et al (1977).

Ligation of the Internal Mammary Artery was used in the United States in the mid-1950's, Preston (1977). Increased coronary flow was allegedly facilitated through collateral vessels proximal to the point of ligation, Cobb et al (1959). Beecher's classic paper. "Surgery as Placebo", Beecher (1961), which compared the results of enthusiastic and skeptical surgeons, detailed the rise and fall of mammary artery ligation.

Implantation of the Internal Mammary Artery, the Vineberg operation, was introduced in 1950. The internal mammary artery was implanted into a 3 to 4-cm tunnel burrowed into the myocardium. It was hoped that a collateral circulation would develop between the implanted artery and the coronary sinuses, Preston (1977). The procedure became popular in the 1960's, when coronary angiography demonstrated that collateral circulation could indeed develop. Although an improvement rate of 85% was reported, Langston et al (1972), several investigations demonstrated that neither objective nor subjective measures of improvement correlated with patency of the implanted artery or establishment of collateral circulation, Bjork et al (1968), Balcon et al (1970). Before the procedure was abandoned, 10,000 to 15,000 operations were performed, with an average operative mortality of about 5%, Preston (1977).

The rise and Fall of Tent Therapy in the 19th Century

When the threat of an epidemic of tuberculosis arose, the superintendent of Manhattan State Hospital decided to reduce overcrowding by erecting a tent for some of the patients on the hospital grounds. About 20 patients were moved into the tent. Great enthusiasm for and attention to the patients, excellent meals, and extreme sanitary precautions characterized the move. Physicians at the hospital began to note marked improvement in the behaviour of a number of these patients. When they were returned to the hospital, many of the patients suffered relapses. Feeling that a new and effective

treatment had been discovered, case histories and articles in learned journals were published attributing the therapeutic success to fresh air, environmental change, and healthy living conditions. Soon the experiment was repeated, and large numbers of patients were moved to tents to profit from the remarkable new treatment. Patients were allowed to participate in designing and decorating the tents. Soon tent therapy spread to other states, including California, Illinois and Ohio. Before long, however, these camps became crowded and the lifestyle became routine and boring. Staff shortages became more apparent, and tent therapy was soon abandoned as ineffective, Ruth Caplan (1969).

The road of medicine is littered with discarded, discredited treatment once touted as efficacious. Those of us who have practised medicine since the 1950s have witnessed beautiful examples of the placebo effect in many diseases. Many medical procedures which were carried out with great enthusiasm have now been abandoned. For examples, the radical mastectomy for carcinoma of the breast, thoracoplasty and pneumoperitoneum for pulmonary tuberculosis, venesection for hypertension, ventro-suspension for various gynaecological complaints including infertility and habitual abortion. The following two extracts from the Journal of Malaya, British Medical Association Malaya Branch, Vol. 2, No. 3, December 1938, pp. 113-123, Williams (1938) are interesting: (1) "Venesection: 10 cc of blood was removed from the longitudinal sinus and immediately re-injected into the peritoneum. In this way the load was taken off the heart for the time being, but the child was not permanently deprived of its blood." (2) "The treatment of enteritis depends entirely on the individual case. Each baby is a law unto itself, and generalisations only lead to trouble. The acute infective type is best treated with a brisk purge such as castor oil, a rectal and a stomach washout, while everything is done to relieve the dehydration. Intravenous salines have little advantage over subcutaneous and intraperitoneal. Subcutaneous salines and glucose can be given in sufficient quantities at six hourly intervals if necessary."

Placebos and Pain

Of all the ills man is subjected to, pain seems to be the one most urgently requiring treatment.

The significance of the wound seems to have great influence on the amount of pain resulting from a given injury. In a study of men wounded in battle, Beecher (1946) was astonished to find in some 215 seriously wounded men that only 25% had enough pain to want anything done about it and so stated in response to a direct question which reminded them that they could have a narcotic if they wanted it. Three-quarters simply did not need such help. This study was repeated in civilian life where the injury was merely a surgical wound, made under anaesthesia. In this latter case the ratio was reversed. More than 80% of such individuals had enough pain to want something done about it. The wounded soldiers were studied principally on the Anzio Beachhead where shelling never stopped day or night for months and where every individual realised that the possibility of death was not a remote thing even for himself. When such men were struck down, the wound meant that the war was suddenly over for the individual; it was a ticket to the safety of the hospital and then home. In civilian experience the necessity for surgery is uniformly considered to be a disaster by normal individuals. The significance of the wound determines the suffering therefrom.

Suffering has two components: First, there is the original sensation produced, in the case of pain by stimulation of pain endings by some noxious agent; second, there is the meaning of this sensation, called the reaction or processing component, Beecher (1956).

Beecher (1960) pointed out that the average effectiveness of placebos when dealing with pathological pain is 35%, whereas the average effectiveness of placebos with experimentally contrived pain is only 3.2%. In other words, the placebo is ten times more effective in relieving pain of pathological origin that it is in relieving pain of experimentally contrived origin. There is more anxiety associated with pain from disease than there is in pain experimentally contrived in the laboratory. When stress is severe placebos are more effective than when stress is less or absent.

Surgery as Placebo

Placebos have increased effectiveness with increased stress. The situation prevailing before, during, and after surgery is one

usually filled with grave anxiety and stress. It would be surprising if, in this charged atmosphere, surgery did not have a powerful placebo action, in addition to what it may or may not accomplish surgically.

The surgeon practises and has practised the most powerful, dangerous, but most highly-regarded and most generously-rewarded type of placebo treatment; witness the uterine suspensions, operations for adhesions resulting from previous surgical adventures, thoracoplasty for pulmonary tuberculosis, radical mastectomy, ligation of the internal mammary artery, implantation of the internal mammary artery, and many other surgical procedures which have now fallen into disrepute.

In 1939 it was suggested, in Italy, that the pain of angina pectoris could be greatly lessened by ligation of the internal mammary arteries. Eventually this suggestion was adopted in the United States with great enthusiasm and quite spectacularly favourable results were obtained. Not only were the subjective results impressive, the patient said they felt better and the objective evidence supported this: there was great reduction in the number of nitroglycerin tablets taken, and exercise tolerance was greatly increased. There was, for example, one patient who could take only four minutes of standardized exercise whereupon intolerable pain stopped him and the T-waves in his ECG inverted in an ominous way. After the operation this individual could exercise for ten minutes without pain on the exercise steps and his T-waves did not invert, Beecher (1962).

Several individuals, Cobb et al. (1959). Dimond et al. (1958), Adams (1958), Fish, et al. (1958), began to wonder if this might not be a placebo effect. They therefore went to their patients, explained the situation and told them they would like to carry out a study in which the patients would not know what had been done, nor would the observers know until the study was completed. They told their patients that half of them would have the internal mammary arteries exposed and ligated and the other half wound simply have them exposed but not ligated. These studies were carried out and in the case the individual who had had intolerable pain after four minutes of exercise and who after the operation could stand ten minutes of exercise had had only the sham operation. Many similar samples indicated that ligation had no real effect beyond that of a placebo effect, Beecher (1962). When it became evident that a sharm operation produced equally good results this operation was abandoned in the United States within a two-year period.

A placebo may be inert in the usual sense, but it is not inert in its effect. It is a powerful agent whose primary site of action is the central nervous system, the cerebral cortex, Beecher (1961).

The literature contains considerable data indicating that the therapeutic result could be influenced by the enthusiasm or scepticism of the surgeon. Wolf (1959) says: "The degree to which the physician is able to induce in his patients a state of arousal or readiness for a favourable response, the more potent the medication he gives will be." In other words, placebos are potent where there is strong motivation on the part of the patient toward recovery.

Our aim in medicine is to relieve often, and to cure when we can. Placebo effects are not to be despised; they play a part — sometimes a very important part — in surgical success; but we would be deceived by our own manoeuvers if we fail to find out when placebo effects may be the sole agents functioning in a given case, Beecher (1961).

Toxic and Side Effects of Placebo

Not only do placebos produce beneficial results, but like other therapeutic agents they have associated toxic effects. These are both subjective and objective.

Wolf (1950) pointed out that extensive physiological changes may follow the administration of placebos.

Abbot, Mack and Wolf (1952) found in 13 experiments with placebos on a subject with a gastric fistula that the gastric acid level decreased in eight experiments, increased in two, and was unchanged in three. Whereas, in a second group of 13 experiments with no agent used, the gastric acid level increased in one case, decreased in four and remained the same in eight. The gastric acid level fell apparently about twice as often when a

placebo was used as when no agent was administered.

Wolf and Pinsky (1954) reported an interesting study on the "Effects of Placebo Administration and Occurrence of Toxic Reactions". They found in studying a supposedly effectively drug (mephenesin) and a placebo (Lactose) in patients with anxiety and tension as prominent complaints, that the symptoms were made better in about 30% of 31 patients. It is interesting to observe that the improvement rate was greater on the subjective side than it was when objective signs of anxiety such as tremulousness, sweating, and tachycardia were considered. In this case (objective signs) about 17% were made better. Many of the patients had minor or equivocal complaints such as lightheadedness, drowsiness, and anorexia while they were taking both mephenesin and placebos. There was no clear-cut predominance of these symptoms with either of the preparations. Only three patients had major reactions. One of the three had sudden overwhelming weakness, palpitation, and nausea within 15 minutes of taking the tablets. Identical reactions occurred with both placebos and mephenesin. In a second patient a diffuse itchy erythematous maculopapular rash developed after ten days of taking pills. A skin consultant considered the eruption to be a typical dermatitis medicamentosa. After the use of the pills was stopped the eruption quickly cleared. Later it was learned that the rash had developed while she was taking placebos. In a third patient within ten minutes of taking the pills, epigastric pain developed that was followed by watery diarrhoea, urticaria, and angioneurotic oedema of the lips. After 48 hours and again after 96 hours, a second and third trial of pills produced the same reaction. The patient was shifted to another batch. When the same reactions followed again, she was given no further pills. When the batches were finally identified, it was found that she had had her severe reactions with both mephenesin and placebos.

Beecher (1955) observed in his studies there is a sizable incidence of effects attributable to the placebo as follows: dry mouth, 7 subjects out of 77, or 9%; nausea, 9 subjects out of 92, or 10%; sensation of heaviness, 14 subjects out of 77, or 18%; headache, 23 subjects out of 92, or 25%; difficulty in concentrating, 14 subjects out of 92, or 15%; drowsiness, 36 subjects out of 72, or 50%; warm glow, 6 subjects out of 77, or 8%; relaxation, 5 subjects out of 57, or 9%; fatigue, 10 subjects out of 57, or 18%; sleep, 7 subjects out of 72, or 10%. The effects mentioned were recorded as definite but without the subject's or observer's knowledge that only a placebo had been administered.

Cleghorn, Graham, Campbell, Rublee, Elliott and Saffran studied the adrenal cortex in psychoneurotic patients where anxiety requiring hospitalization was the most prominent feature. They found that a placebo (isotonic sodium chloride) injection produced a response in patients with severe anxiety similar to that given by corticotropin (ACTH) in normal patients. They showed that placebos can set off the adrenals and mimic drug action and that the more severe the disease state the greater is their effect, Beecher (1955).

Of special interest are the studies of Tucker (quoted from Wolf and Pinsky, 1954) in which observations on the toxic effects of streptomycin given for thoracoplasty were controlled by blind placebo administration. Of the patients given only placebo, 61% showed one or more of the evidences of "streptomycin toxicity". The disturbances included high-tone and low-tone hearing loss, eosinophilia, and impairment of urea clearance.

Further confirmation of the "toxicity" of placebo administration is found in the studies of Diehl (1933) on the treatment of the common cold. Using lactose placebos as a control for a variety of medications taken by mouth, he found that in some of the subjects receiving placebos nausea, faintness, and diarrhoea developed. In a later study he investigated the ability of a vaccine to prevent colds, Diehl et al (1940), and found a reduction of 55% in the number of yearly colds among those given vaccine and 61% among a control group who received injections of isotonic sodium chloride solution. Of the group who received the placebo 7% reported "toxic" symptoms. In a study of the effects of vitamins he observed, "Results reported by many persons who received placebos would serve as splendid testimonials, as have anything, for the prevention of

colds'', Cowan, Diehl and Baker (1942). Again some of those receiving placebo reported ''toxic'' reactions.

Conclusion

Placebo has an important place in medical practice. Placebos are more used than any other class of drugs. There are many occasions when an appropriately presented placebo will be less harmful and perhaps more beneficial than a complex and incompletely understood drug or medical procedure. The placebo effect is a component of any therapeutic intervention and its influence is seen in many diseases.

Not only do placebos produce beneficial results, but like other therapeutic agents they have associated toxic effects. These are both subjective and objective.

When stress is severe placebos are more effective than when stress is less or absent. The significance of the wound determines the suffering therefrom. Placebo is ten times more effective in relieving pain of pathological origin than it is in relieving pain of experimentally contrived origin.

In surgery, because of the charged atmosphere, the surgical procedure does have a powerful placebo action. A placebo may be inert in the usual sense, but it is not inert in its effect. It is a powerful agent whose primary site of action is the central nervous system, the cerebral cortex.

The physiology of the placebo effect remains a relatively unexplored area, Wolf (1950). There are substantiated, specific physiologic changes associated with the placebo effect that await further definition. The placebo effect in most instances enhances the well-being of the patient, and this is an essential aspect of medicine. More emphasis on the potency of the placebo and its positive effects is needed. The placebo effect demands greater comprehension and must be allowed to survive if medicine is to provide optimal care for patients, Benson & Epstein (1975). The placebo effect has been one of the physician's most potent therapeutic assets, Benson and Epstein (1975). The placebo effect, unlike most other forms of therapy, has withstood the test of time and continues to be safe and inexpensive, Benson and McCallie (1979).

REFERENCES

1. Abbot, F.K., Mack, M. and Wolf, S.: The Action of Banthine on the Stomach and Duodenum of Man with Observations on the Effects of Placebos. Gastroenterology 1952, 20:249-261.
2. Adams, R.: Internal mammary artery ligation for coronary insufficiency — an evaluation. New England J. Med. 1958, 258:113.
3. Anderson, T.W.: Vitamin E in Angina Pectoris, Can. Med. Assoc. J. 1974, 110:401-406.
4. Anrep, G.V. et al.: The coronary vasodilator action of khellin. Amer. Heart J. 1949, 37:531-542.
5. Ayad, H.: Khellin in Angina Pectoris, Lancet 1948, 1:305.
6. Aznar-Ramos, R. et al.: Incidence of side effects with contraceptive placebo. Am. J. Obst. & Gynaec. 1969, 105:7, 1144-1149.
7. Balcon, R. et al.: Clinical Evaluation of Internal mammary artery implantation, Lancet. 1970, 1:440-443.
8. Beecher, H.K.: Pain in Men Wounded in Battle, Ann. Surg. 1946, 123:96-105.
9. Beecher, H.K.: The Powerful Placebo, JAMA. 1955, 159:1602-1606.
10. Beecher, H.K.: Relationship of Significance of Wound to Pain Experienced, JAMA. 1956, 161:1609-1613.
11. Beecher, H.K.: Control of Suffering in Severe Trauma, JAMA: 1960, 173:5, 534-536.
12. Beecher, H.K.: Surgery as Placebo, JAMA. 1961, 176:13, 1102-1107.
13. Beecher, H.K.: Pain, Placebos and Physicians. Practitioner, 1962, 189:8, 141-155.
14. Benson, H. and Epstein, M.D.: The Placebo Effect: A Neglected Asset in the Care of Patients, JAMA. 1975, 232:12, 1225-1227.
15. Benson, H. and McCallie, D.P.: Angina Pectoris and the Placebo Effect, New England J. Med. 1979, 300:25, 1424-1429.
16. Bjork, L. et al.: Result of internal mammary artery implantation in patients with angina pectoris. Scand. J. Thorac. Cardio. Vasc. Surg. 1968, 2:1-9.
17. Brown, M.G. and Riseman, J.E.F.: The comparative value of purine derivatives in the treatment of angina pectoris. JAMA 1937, 109:256-258.
18. Catiglioni, A.: Adventures of the Mind. New York, Alfred Knopf 1946.
19. Cobb, L.A. et al.: An evaluation of internal mammary artery ligation by a double-blind technic. New Eng. J. Med. 1959, 260:1115-1118.
20. Cowan, D.W., Diehl, H.S. and Baker, A.B.: Vitamins for the Prevention of Colds, JAMA. 1942, 120:1268.
21. Dewar, H.A. and Grimson, T.A.: Further experiences with Khellin in angina of effort. Br. Heart J. 1951, 13:348-352.
22. Diehl, H.S.: Medicinal Treatment of the Common Cold. JAMA. 1933, 101:2042.
23. Diehl, H.S. et al.: Cold Vaccines: Further Evaluation. JAMA. 1940. 115:593.

24. Dimond, E.G., et al.: Evaluation of internal mammary artery ligation and sham procedure in angina pectoris, Circulation. 1958, 18: 712-713.
25. Evans, W., and Hoyle, C.: The Comparative value of drugs used in the continuous treatment of angina pectoris. Q. L. Med. 1933, 2:311-338.
26. Findley, T.: Med. Clin. N. Am. 1953, 37:1821.
27. Fish, R.g., et al.: Internal mammary artery ligation for angina pectoris; Its failure of produce relief. New Engl. J. Med. 1958, 259:418-420.
28. Gillilan, R.E.; et al.: Quantitative evaluation of vitamin E in the treatment of angina pectoris. Am. Heart J. 1977, 93:444-449.
29. Gilbert, N.C. and Kerr, JA.: Clinical results in treatment of angina pectoris with the purine-base diuretics. JAMA. 1929, 92:201-204.
30. Gold, H. et al.: The xanthines (theobromine and aminophylline) in the treatment of angina pectoris. JAMA. 1937, 108:2173-2179.
31. Greiner, T., et al.: A method for the evaluation of the effects of drugs on cardiac pain in patients with angina of effort: a study of khellin (visammin). Am. J. Med. 1950, 9:143-155.
32. Hillis, B.R.: The Assessment of Cough-Suppressing Drugs. Lancet. 1952, 1:1230.
33. Hofling, C.K.: The Place of Placebo in Medical Practice. General Practitioner. 1955, 11:103-107.
34. Houston, W.R.: The Doctor Himself as a Therapeutic Agent. Ann. Int. Med. 1938, 11:1416-1425.
35. Jastrow, Jr., K.: Lancet. 1913, 2:1137.
36. Langston, M.F. Jr., et al.: Evaluation of internal mammary artery implantation. Am. J. Cardiol. 1972, 29:788-792.
37. Leiner, G.C. and Dack, S.: The ineffectiveness of khellin in the treatment of angina pectoris. J. Mt. Sinai Hosp. 1953, 20:41-45.
38. Osher, HL., et al.: Khellin in the treatment of angina pectoris. New Engl. J. Med. 1951, 244:315-321.
39. Park, L.C. and Covi, L.: Nonblind Placebo Trial. Arch. Gen. Psychiat. 1965, 12:336-345.
40. Preston, T.A.: Coronary Artery Surgery: A critical review. New York, Raven Press, 1977, pp. 7-26.
41. Rapport, S. and Wright, H.: Great Adventures in Medicine. New York, The Dial Press, 1952.
42. Rashkis, H.A. and Smarr, E.R.: Psychopharmacotherapeutic research: A triadistic approach. Arch. Neurol. Psychiatry. 1957, 77:202-209.
43. Ruth Caplan: Psychiatry and the community in nineteenth century America. New York: Basic Books.
44. Shapiro, A.K.: The Placebo Effect in The History of Medical Treatment: Implications for Psychiatry. Am. J. Psychiat. 1959, 116:298-304.
45. Shute, W., et al.: Vitamin E in Heart Disease. The anginal syndrome. Med. Rec. 1947, 160-21-26.
46. Sigerist, H.E.: The Great Doctors, New York: Doubleday & Co, 1958.
47. Smith, F.M., et al.: Theophylline in the treatment of disease of the coronary arteries. Arch Intern. Med. 1935, 56:1250-1262.
48. Traut, E.F. and Passarelli, E.W.: Placebo in the Treatment of Rheumatoid Arthritis and Other Rheumatic Conditions. Ann. Rheum. Dis. 1957, 16:18, 18-21.
49. Uhlenhuth, E.H., et al.: The symptomatic relief of anxiety with Meprobamate, Phenobarbital and Placebo, Am. J. Psychiat. 1959, 115:905-910.
50. Uricchio, J.F. and Calenda, D.G.: Treatment of angina pectoris, New Engl. J. Med. 1953, 249:689-698.
51. Van Dyke, H.B.: Scientific Monthly. 1947, 64:322.
52. Vogelsang, A. and Shute, E.V.: Effect of vitamin E in coronary heart disease. Nature, 1946, 157:772.
53. Vogelsang, A., et al.: Vitamin E in heart disease: preliminary report. Med. Rec. 1947, 160:21-26.
54. Walker, S.H.: Ineffectiveness of aureomycin in primary atypical pneumonia: A controlled study of 212 cases. Amer. J. Med. 1953, 15:593.
55. Williams: Journal of Malaya, British Medical Association, Dec. 1938, Vol. 2, No. 3, pp. 113-123.
56. Wolf, S.: Effects of Suggestion and Conditioning on Action of Chemical Agents in Human Subjects, Pharmacology of Placebos. J. Clin. Invest. 1950, 29:100-109.
57. Wolf, S.: Pharmacology of Placebos. Pharmacol. Rev. 1959, 11:689-704.
58. Wolf, S. and Pinsky, R.H.: Effects of Placebo Administration and Occurrence of Toxic Reactions. JAMA. 1954, 155:339-341.

ALLERGIC — BUT TO WHAT?

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INTRODUCTION AND DEFINITION

The term "allergy" has been loosely used to encompass a variety of reactions from anaphylaxis to any non-specific adverse reaction like giddiness, nausea and vomiting. This misconception has been perpetuated by patients who frequently approach the physician claiming to be "allergic". This then puts the onus on the doctor to determine the cause of the allergy. Therefore it behoves the doctor to:

1. *establish the allergic basic of the disease; and*
2. *determine its cause if possible;*
3. *give symptomatic treatment always and curative treatment if the cause can be ascertained.*

Allergy can be defined as an altered reactivity of the host to a foreign substance through immunological mechanisms. Many authors in fact restrict the definition to immediate hypersensitivity.

Immnological Mechanisms

There are primarily 4 major types of immunological mechanisms that are responsible for producing disease:

Type I : IgE mediated, like bronchial asthma, allergic rhinitis.

Type II : IgG cytotoxic antibody reactions like blood transfusion reactions.

Type III : Immune-complex mediated disease like vasculitis, Systemic Lupus Erythematosus.

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Type IV : Delayed hypersensitivity reactions like in contact dermatitis, Tuberculosis.

Clinical Recognition of Immunological Mechanisms

The time and type of reaction can be used as a guide to the type of reaction involved. This will in turn dictate the type of tests to be employed. In some instances, particularly in drug reactions, more than one reaction type exists.

Type I reaction pattern usually occurs in 1 to 6 hours and is characterised by angio-oedema, urticaria, asthma or rhinitis associated with conjunctivitis.

Type II reaction pattern occurs within 6-12 hours and its manifestation results in target organ damage, e.g. in transfusion reaction with chills, rigors, haemoglobinuria.

Type III reaction pattern occurs within 24 hours and results either in a localised indurated swelling after foreign protein injection e.g. tetanus toxin and immune-complex diseases manifesting as glomerulonephritis, arthritis and vasculitis. In cases where immune-complexes are constantly being formed like in Systemic Lupus, every organ can be involved.

Type IV reaction pattern is the slowest and occurs over 48 hours, characterised by eczematous process in the skin or granuloma function in lungs like contact dermatitis and Tuberculosis respectively.

Investigating Immunological Mechanisms

Based on the suspected type of reaction, clinically specific investigations, besides the basic screening tests, can be ordered. In Type I reaction, prick and scratch tests read at 20

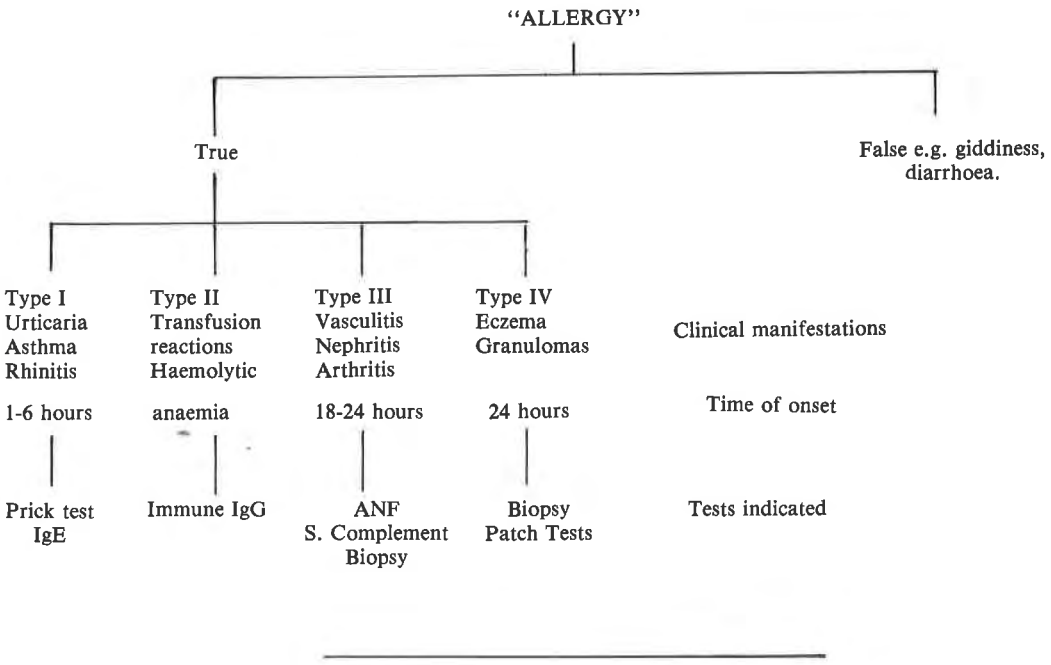
minutes, with appropriate total and specific IgE levels can give some clues to the aetiology provided always there is clinical correlation. In Type III reaction immune IgG testing is of some value. Type III reactions can be evaluated by measurement of complement, antinuclear antibody, skin or renal biopsy when indicated. Type IV reactioins lend themselves to confirmation by patch testing or skin and needle biopsy in the appropriate setting.

Treatment

The manifestation of most types of reaction patterns can be treated by judicious use of antihistamines and steroids, both oral and topical. In case of an infectious aetiology, appropriate antibacterial therapy is indicated. Specific therapy in Type I reactions include densensitization and allergen avoidance in Type IV contact reaction.

Summary

OFFICE GUIDE TO MANAGEMENT OF ALLERGIC REACTIONS



TRANSIENT ISCHAEMIC ATTACKS (TIA)

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As the name implies TIAs are thought to result from ischemia to the brain, too brief to cause infarction. They are defined as episodes of temporary and focal cerebral dysfunction of vascular origin, leaving no persistent neurological deficit and lasting less than 24 hours[1]. This 24 hour time limit is now widely accepted, but is nonetheless arbitrary. In clinical practice, patients who have recovered in a matter of minutes, hours or a few days are investigated and treated in the same way, since the pathogenesis of these attacks is assumed to be similar. It must be remembered that there are other common causes for transient focal neurological dysfunction such as migraine and focal epilepsy.

Great attention is directed to these attacks (TIAs) because they are premonitions of major strokes and their treatment may prevent a disastrous stroke. Frequently, the diagnosis of TIA is based on history given by the patient or the relatives. There may be no signs and there are no laboratory tests which can give an objective measure of these attacks.

Pathogenesis:

It is now well established that TIA at least within the carotid territory is due to embolism of atheromatous and/or thrombotic material. There is less agreement with respect to TIA within the vertebrobasilar territory where mechanical or haemodynamic factors may be more important. The evidence for thromboembolism causing TIA is largely clinical. 20 years ago Ross Russel[2] described the passage of emboli through the retinal circulation in patients during attacks of Amaurosis Fugax. Many clinicians have also noted this phenomenon.

There is evidence to support the view that the pathogenetic mechanism of TIAs persisting less than 60 minutes differs from those of longer duration. The shorter TIAs are probably due to artery to artery emboli, whereas the ones lasting longer are probably from the valves or chambers of the left heart. There is now evidence that a prolapsed mitral valve is a common source of such emboli to the brain[3].

In 60% of TIAs, source of embolism is shown in neck vessels in angiogram[4]. The neurological features of the transient episodes indicate the territory of artery involved — carotid or vertebrobasilar.

The hallmark of TIA of carotid territory is transient monocular blindness (Amaurosis Fugax) or transient hemisphere attacks. These two almost never occur together, but could occur at separate times in the same patient.

In Amaurosis Fugax, loss of vision in one eye is usually completed in seconds, likened to a curtain, blind or shutter coming down or going up from below. Vision is restored in less than 5 minutes, described as like clearing of atmospheric fog.

Transient hemisphere attacks affect the region of the middle cerebral artery and produce focal motor or sensory deficits. Dysphasias and apraxias also occur, but less commonly.

In vertebrobasilar TIAs, the variety of symptoms is too large to list, but the most diagnostically reliable are diplopia, dizziness, circumoral numbness, dysarthria, ataxia, bilateral weakness or numbness (effect on long tracts bilaterally) and homonymous visual field loss.

Epidemiology and Natural History:

It is estimated that about one-third of those who suffer recurrent neurological deficit (TIAs) continue to have attacks without developing permanent disability; another third eventually have cerebral infarction and in the

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remainder, the attacks cease spontaneously. The natural history of attacks secondary to vertebro-basilar insufficiency is more benign than that associated with carotid artery syndrome.

Available evidence indicates that in TIA patients there is 8% chance per year (25% in 3 years) of developing a stroke[5]. There is a 5% annual risk of death (5 year mortality of 25%). However, the majority of these fatalities are due to myocardial, rather than cerebral, infarction.

In a study done in Singapore[6], it was found that 46% of cases of stroke had experienced some form of TIA, mostly related to motor symptoms (Table I and II).

TABLE 1
STROKE STUDY IN SINGAPORE

No. of cases of Stroke Studied	No. Experiencing TIA
80	37 (46%)

TABLE 2
STROKE STUDY IN SINGAPORE

No. of Cases Experiencing TIA	37
2 symptoms	7
3 symptoms	14
Symptoms	
Weakness	23
Clumsy hand	10
Slurred speech	10
Clumsy gait	9
Numbness	8

Evaluation of a patient with TIA involves eliciting bruits in the neck. A host of techniques for noninvasive diagnosis has been devised to assess carotid occlusive disease. These tests can identify haemodynamically significant internal carotid artery stenosis with an accuracy of 85-90%. These tests involve ultrasound and pulsed doppler examination of the carotid artery to show the degree of stenosis and directional doppler showing direction of flow in periorbital collaterals in carotid stenosis. These tests are not a substitute for standard angiography which is used as the final arbitrator of haemodynamically significant carotid stenosis. The ability to obtain angiograms noninvasively with Digital Subtraction Angiogram (DSA) has catapulted this technique to prominence. In DSA, a very small amount of contrast is injected intravenously. A 'mask' image formed prior to contrast injection is digitally subtracted from sequential images formed during passage of iodinated contrast intravenously — using computerised fluoroscopy and image intensification.

Angiography is less indicated for vertebrobasilar TIA because surgical lesions are less often found and are less surgically treatable.

A CT scan in a TIA can show a suprise infarct in 14% of cases and other unexpected lesions too.

Treatment of TIAs:

The goal of therapy is to avoid cerebral infarction. This involves risk factor management, especially antihypertensive therapy, stopping cigarette smoking and treatment of increased haematocrit and thrombocytosis. The role of endarterectomy and bypass surgery are no more clear than the role of antithrombotic therapy.

Asprin for TIA:

Since the studies of Fields et al[7], and Barnett et al[8], aspirin has become a standard, but there are uncertainties about the optimum dosage.

There is good evidence that aspirin is safe and effective for reducing the risk of recurrent TIA or stroke in men. There is no evidence that aspirin is effective in reducing TIAs in women or is of benefit in the treatment of completed strokes in men or women.

Theoretical considerations indicate that the optimum dose of aspirin would interfere with platelet function without interfering with the protective effect from the good prostaglandin called prostacyclin synthesized in the endothelium of the vessel wall. This dose is one-half a regular aspirin tablet a day (160 mg per day). The question of the optimum dosage of aspirin should be resolved by the on-going U.K. study.

There is theoretical reason for believing that Persantin may potentiate the benefit of aspirin as a platelet antiaggregant. Until the North American study on this synergism is completed, no conclusions about clinical benefit can be concluded.

Anticoagulants:

In four randomised TIA studies with anticoagulants, no benefit in stroke prevention was noted. Other non-randomised trials claimed benefit. On an empirical basis, it is reasonable to recommend that when platelet antiaggregants fail, TIA patients be given anticoagulants.

Surgical Therapy:

Patients with recent TIAs thought to be due to extracranial carotid arterial lesion would be considered for surgery. In North America carotid endarterectomy is accepted as treatment for carotid TIAs in surgical candidates, despite the lack of randomised studies to prove this point unequivocally.

Extracranial to intracranial (EC-IC) arterial anastomosis was being done in great numbers for TIAs in surgical candidates in North America. An international randomised trial concluded recently demonstrated lack of benefit for this surgical treatment[9].

REFERENCES

1. World Health Organisation (1978). Cerebrovascular disorders: A clinical and research classification. World Health Organisation, Offset Publication No. 43, Geneva.
2. Russel RWR. The source of retinal emboli. Lancet, 1968, 2, 789-792.
3. Barnett HJM. Embolism in mitral valve prolapse. Annu. Rev. Med. 1982, 33: 489-507.
4. Harrison MJG and Marshall J. Angiographic appearance of carotid bifurcation in patients with completed stroke, transient ischemic attack and cerebral tumour. BMJ, 1976, 1, 205-207.
5. In Toole JF (ed). Cerebrovascular disorders 3rd Ed Raven Press, 1984 New York pp. 101-116.
6. Chew WLS, Chen AJ, Puvanendran K, et al. Risk Factors in stroke patients: Sing. M. J. 1984, 25, 97-103.
7. Fields WS et al. Controlled trial of aspirin in cerebral ischaemia. Stroke, 1977, 8, 301.
8. Barnett HJM. A randomised trial of aspirin and sulfinpyrazone in threatened stroke. N. Engl. J. Med. 1978, 299: 53.
9. Failure of extracranial — intracranial arterial bypass to reduce the risk of ischaemic stroke. Results of an international randomized trial: N. Engl. J. Med. 1985, 313, 1191-1200.

SIMPLE OFFICE TECHNIQUES IN THE MANAGEMENT OF VAGINAL DISCHARGE

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INTRODUCTION

Vaginal discharge is a common complaint encountered in general practice. While there is wide variation as to what is considered normal compared to what is abnormal in terms of quantity of discharge, the diagnosis of a pathological discharge associated with pruritus is generally very subjective. The accuracy of the diagnosis depends very much on the practitioner's experience.

Certain varieties of vaginal infection like, for example, monilial vaginitis are quite easily diagnosed especially when they present in the classical text-book manner. However, it is not unusual to encounter monilial infection behaving in some subtler manner or some malodourous discharge which seems to persist in spite of treatment. It would be an advantage if practitioners knew what they were treating at first consultation. One cannot diagnose vulvovaginal candidiasis over the telephone, nor over the desk, nor even on casual clinical observation. Doctors owe it to their patients to make as accurate a diagnosis as possible before commencing treatment. A high vaginal swab would be the ideal approach but this will not only increase the cost to the patient but can also hold up treatment pending the laboratory report.

In this article, the authors will attempt to outline what general practitioners can do in their office to narrow down the diagnosis of a vaginal discharge. These procedures have been planned in a flow-chart manner and even practitioners with simple equipment and reagents can perform them. More elaborate and time-consuming procedures that involve centrifuging and staining have been omitted for obvious reasons. While this article deals mainly with the diagnosis of monilial and trichomonial infections, we expect that practitioners will find an immense degree of satisfaction in being a little more sure of what they are treating.

It need not be mentioned that patients will generally have more confidence with a doctor who takes the trouble to perform a few simple tests before their very eyes prior to informing them of the diagnosis.

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Equipment

A list of equipment and materials that will be necessary would include:

1. Normal Saline (in a dropper bottle)
2. 10% Potassium Hydroxide Solution (in a dropper bottle)
3. pH paper (preferably with a wide range of readings from pH 1-12; neutral litmus paper can also be used but accurate pH readings will not be possible)
4. Glass slides (for microscope use) and cover glass
5. Plastic or metal spatulae
6. Microscope

Methodology

After the routine history and general examination, a pelvic examination is performed preferably in the supine position. The vaginal speculum is best lubricated with some plain water instead of lubricating jelly.

A reasonable amount of vaginal discharge is picked up with the spatula during the speculum examination and is transferred onto two microscope slides (designated slide A and B); another sample is obtained from the middle third of the vagina and is smeared onto the pH paper. Alternatively, a piece of pH paper is held with an artery forceps and allowed to come in contact with the discharge during speculum examination.

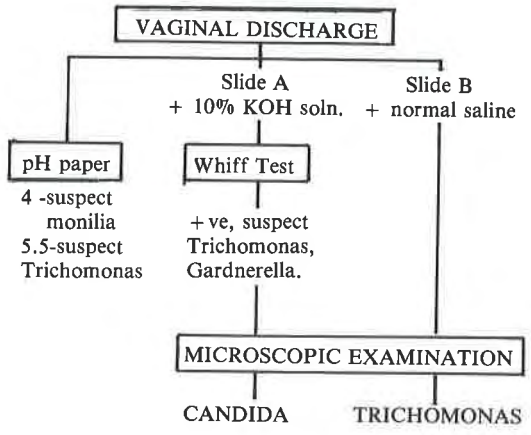
Slide A — A drop of 10% Potassium Hydroxide solution is added onto the specimen. A sniff of this mixture is carried out to ascertain whether a 'fishy' odour is present (Whiff Test). A cover glass is applied and the slide observed under the microscope under low power. In the presence of Candida infection, the typical pseudohyphae of the organism can be seen.

Slide B — A drop of normal saline is added, cover glass applied and the slide is viewed under the microscope under similar low power. In the presence of Trichomonas infection, motile flagellates are observed. A description of the morphology of these organisms is found in most text-books on clinical examination.

Results

A diagram of the flow chart and the results are shown below:

ILLUSTRATION 1. FLOW-CHART OF OFFICE PROCEDURE.



pH readings:

Normal vaginal pH is generally acidic (between 3.8 — 4.2) due largely to the activity of the Doderlein bacillus, which is a natural commensal. However, low pH favours growth of Candida and that is why it is not unusual to see patients presenting with vaginal candidiasis premenstrually, after using commercial douches (which can also cause hypersensitivity reactions) or spermicidal preparations which are highly acidic. Trichomonial and Gardnerella infections, on the other hand, tend to thrive in an alkaline pH. In the past, physicians who did not have the benefit of medications available today treated their patients quite successfully by merely altering the vaginal pH with simple buffer solutions.

Therefore, although this test is not conclusive, a simple test of the vaginal pH can often be helpful to the practitioner in narrowing down the likely infection.

Whiff Test: Slide A.

Sniffing at some vaginal discharge may not appear very aesthetic, but this technique to detect Trichomonial and Gardnerella infections is well documented. The basis behind this test is that certain amines are released when 10% Potassiun Hydroxide solution is added to vaginal discharge containing these organisms[1]. These two organisms have an inclination to exist together and it is believed that the so called typical frothy green discharge 'pathogomic of Trichomoniasis' is more the result of the activity of Gardnerella vaginalis rather than the offending flagellate in question.

A quick sniff of the mixture after Potassium Hydroxide solution is added will detect a 'fishy' odour quite typical of this infection.

Microscopy

For practitioners who own a microscope, this would be the most useful part of the entire office technique as it will confirm whether the discharge is due to Candida or Trichomonas.

Slide A, irregardless of the result of the Whiff Test, is then viewed under the microscope and the typical Candidial organisms looked for. Potassium Hydroxide is used to search for Candida albicans because it digests and destroys white blood cells and epithelial cells, leaving only the pseudohyphae and spores intact[2].

Slide B, with the vaginal discharge diluted with normal saline, will reveal motile flagellates when viewed under low power. In addition, with some degree of experience, one can look for 'clue cells' which are found in Gardnerella infection[2]. The quantity of white blood cells reflects the degree of vaginal inflammation. Normally, very few white cells are found in the vagina.

Comments

With some organisation and practice, these tests should not take more than a few minutes to perform and the results can be very satisfying. It is obvious that the limitation with simple techniques is that they cannot diagnose more serious sexually transmitted disease. Therefore it would be wise to investigate these patients for the presence of gonococcal or Chlamydial infection whenever their symptoms fail to respond to treatment. Many general practitioners already own glucose meters and management of diabetes has become less of a guesswork for most of them. It would take little imagination to see the vast potential in having a mini-lab where one can expand into gram staining, thereby being able to identify diplococci in vaginal smears and even derive information from peripheral blood films.

It would be beyond the scope of this article to deal with treatment. However, the authors would like to draw attention to the fact that, since Candida and Trichomonas infection prefer opposing pH media, it would therefore be very unusual to find these two infections at the same time. It would also be considered blunderbuss treatment to prescribe these patients both anti-fungal and anti-trichomonial agents at the same time.

Successful treatment of patients with vaginitis depends on both the proper diagnostic sequence and proper treatment regimen[2]. In treatment failures, the following pitfalls should be considered:

1. Diagnosis based on appearance of the discharge (failure to perform wet smears)
2. "Telephone" diagnosis and treatment.
3. Broad spectrum, "blunderbuss" remedies
4. Failure to treat the sexual partner.
5. Failure to inspect the condition of the vulval, vaginal and cervical epithelia.
6. Treatment based on Pap smear evidence of infection[3].

Good doctoring includes a sense of responsibility to treat patients as accurately as possible.

REFERENCES

1. Chen K C S, Forsyth P S, Buchanan T M, Holmes K K. Amine content of vaginal fluid from untreated and treated patients with nonspecific vaginitis. J Clin Invest 1979, 63: 828-835.
2. Fleury F J. Adult Vaginitis. Clin Obst & Gynecol. 1981, 24(2): 407-438.
3. Perl G. Errors in the diagnosis of Trichomonas vaginalis infection — as observed in 1199 patients. Obst Gynecol 1972, 39: 7-9.

HOME STUDY

COMMON SKIN INFECTION: PARASITIC INFECTIONS

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A variety of parasites can produce systemic disease and cutaneous lesions. While systemic parasitic infection can be severe and life threatening, cutaneous parasitic infection often causes discomfort and serious social morbidity. Many cutaneous parasitic infections are contagious and often infected patients transmit the infection to family members. Hence the recognition and prompt treatment of cutaneous parasitic infection is important. The more common and infectious cutaneous parasitic infections will be discussed here.

SCABIES

Scabies is one of the common dermatoses seen in Middle Road Hospital. It is a contagious infection caused by a mite, Sarcoptes scabiei (Acarus scabiei) (Fig. 1). Scabies is characterised by intra-epidermal burrows produced by the female mite. It presents with intensely itchy papular eruptions. The female mite can sometimes be identified from scrapings from the burrows by its characteristic morphology. The male mite is seldom seen, as copulation proves to be fatal for the male.

The pregnant mite burrows into the horny layer of the skin and lays her eggs, producing characteristic pearly fine zig-zag lines. The mite eggs hatch in 3-4 days and the larvae leave the burrow and develop into adult mites in about 2 weeks and the cycle begins again. These mites cause intense pruritus probably from immunlogical response to mite antigen.

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The infection is transmitted by close and prolonged contact from person to person. It is also a sexually transmitted disease. Occasional transmission occurs indirectly from contaminated beddings and clothings. It can be an occupational disease too as doctors, nurses and other health care personel can be infected by handling infected patients. Transmission among children in a nursery or school is not uncommon. Similarly, transmission among soldiers living in common barracks and among people living in old folks' homes is not uncommon.

Clinical features

The incubation period from infection varies from 4 to 6 weeks before symptoms becomes evident. Severe generalised pruritus which is exacerbated at night is characteristic. The onset is gradual, with itch occuring on the finger webs, axillary folds, buttock and feet initially and later becoming generalised.

The characteristic lesion is the burrows which are usually seen in finger webs (fig. 2) and on the wrists. Such burrows are often not obvious in scabies in Singapore. Papules, occasionally pustules, excoriations and crusted lesions are often seen on the hands (fig. 2), wrists, ulnar border of the forearms, axillae, breasts, lower abdomen, gluteal folds (fig. 3), and inner thighs. Papular/pustular lesions on the palms (fig. 4) and soles (fig. 5) are characteristic in children. In adults the face is seldom affected. These characteristic lesions may be masked by treatment with topical steroids. In infants the face and scalp may be affected. The scabetic nodules on the male genitals (fig. 7) are typical and tend to be persistent.

Norwegian scabies occurs where there is overwhelming mite infestation on the skin. There are millions of mites infesting the skin and the condition presents with scaly and crusted lesions all over the body, especially over the bony prominences (fig. 6). Pruritus is absent. It occurs only in immunocompromised hosts e.g. those with underlying malignancy and those on cytotoxic drugs.

Diagnosis

Scabies is usually diagnosed clinically. Skin scraping for the mite is often unsuccessful and is a tedious process. However the classical history and the characteristic morphology and distribution of the infection should direct the physician to the correct diagnosis. In early scabies the physical signs may not be obvious and on grounds of suspicion a trial of antiscabetic may be given.

Treatment

The entire trunk and extremities (not just obvious lesions) has to be treated. The scabicide should be applied thinly but thoroughly from neck downwards to all areas, with special attention to the hands, feet and intertriginous areas. Careful explanation, assurance and reassurance to the patient is essential.

Specific Agents

Benzyl Benzoate (Ascabiol, Benzyl Benzoate): This is an effective and cheap scabicide. 25% benzyl benzoate emulsion should be applied from the neck downwards after a warm bath each night for five days. The emulsion should cover the whole body surface regardless of the distribution of the eruption. The emulsion is cosmetically acceptable generally and does not soil underclothing or bedding. Contact with the eyes may cause stinging and conjunctivitis may develop. Some patients experience increased itching or irritation after application of the emulsion; this is especially common on the male genitalia. For children below 10 years old, a 10% emulsion should be used to prevent irritation.

Malathion 0.5% (Derbac, Prioderm): This is an effective scabicide. A 2-day application is usually adequate and the preparation is not malodourous and less irritating to the skin than benzyl benzoate. It should not be used on infants and young children. It is one of the more preferred scabicides. It is more expensive than benzyl benzoate.

Crotamiton (Eurax, Crotomax, Scabex): This scabicide appears to be less effective than benzyl benzoate and malathion. It is an effective nonspecific antipruritic agent and the itching associated with scabies responds rapidly to the use of this medication. Only crotamiton lotion should be used as creams cannot be applied thoroughly. Five nightly applications are necessary with crotamiton. IT can be used on young children and infants. The eyes and mucosa should be avoided, during application.

Gamma Benzene Hexachloride (Lindane): This is a very effective scabicide. The preparation is relatively pleasant and easy to use. One application is usually sufficient. Unfortunately the scabicide is not available in Singapore. Systemic absorption of gamma benzene hexachloride is associated with toxic effects on the central nervous system.

Supportive measures

Careful explanation, assurance and reassurance are vital. Oral antipruritic agents, antihistamines, may be helpful during the course of scabies. Calamine lotion should be prescribed after the course of scabicide as the pruritus from scabies can persist for several weeks after eradication of the parasites.

Oral antibiotics are seldem required if there is no secondary infection. Acute glomerulonephiritis may occur in patients whose scabetic lesions are complicated by a nephritogenic streptococcal infection.

Treatment of Contacts

All household members and sexual contact of patient with scabies should have prophylactic/epidemiological treatment for scabies at the same time when the patient receives treatment. This will prevent reinfection from household members who may be incubating the disease.

Post-treatment persistence of itch

Sometimes despite treatment of scabies with scabicides, itch persists. The following have to be considered in post-treatment persistence of itch.

a. Inadequate treatment. This is usually due to poor compliance and improper application of the scabicide. Some scabicides should be applied for a longer period then others. eg. it has been recommended that crotamiton should be applied for 5 nights and benzyl benzoate for 3 nights and malathion for 2 nights.

b. Reinfection from untreated family members. Family members of patient with scabies should be treated epidemiologically. This is especially so where there is physical overcrowding in the home Recurrent scabies should prompt the physician to suspect infected family members, and occasionally eradication of scabies is only possible when all family members are treated simultaneously.

c. Hypersensitivity to scabies antigen. Not infrequently pruritus persisting after treatment with scabicides may be due to hypersensitivity to the mite antigen which may remain in the skin for some time. Such pruritus usually clears after a few weeks and should be treated with a short course of antihistamines and topical steriods. Repeat application of scabicide is unnecessary. Nodular lesions on the scrotum and prepuce following scabies are not uncommon. These lesions are itchy and persistent, and in adults can be treated with intralesional steriod injections.

d. Overtreatment. Contact dermatitis from overtreatment may occur. When pruritus and eczema develop, irritant or allergic contact dermatitis should be suspected and treated.

e. Anxiety. Parasitophobia may develop in some patients. There is a persistent belief that the mites are still present in their bodies and this leads to self-multilation. Excoriation and picking scars are obvious. Occasionally a course of tranquillizer e.g. pimozide may help. Sometimes the help of the psychiatrist is necessary. This condition is uncommon.

DERMATOSES DUE TO ARTHROPODS OTHER THAN THE SCABIES MITE

The scabies mite is not the only arthropod that can cause dermatosis in man. Dermatosis from arthropod infestation is not usually simple because the skin lesions are seldom specific. The different types of arthropods which can cause dermatosis in man can be classified as follows:

Human parasites: Itch mite, head louse, body louse and pubic louse, bed bug, human flea.

Animal parasites: Dog or cat flea, sheep tick, harvest mite.

Non-parasitic arthropods: Forage mite, house dust mite.

Diagnosis of the dermatoses from the human parasites is easiest as the parasites permanently reside on or close to the human body. The common human parasitic infections will be discussed.

PEDICULOSIS CAPITIS

While the crab louse, Phthirus pubis, is a distinct genus and species, there is some doubt about the status of the two forms of Pediculus humanus (head and body louse). It is highly probable that the head louse, Pediculus capitis, represents the ancestral type, from which the body louse, Pediculus corporis, evolved to occupy the new niche provided when man began to wear clothes.

Clinical Features

This condition is more common in children but occurs in adults also. It is usually confined to the scalp, particularly the occiptial region and to a lesser degree the postauricular region; it rarely involves the beard and exceptionally other hairy areas. Pruritus is a cardinal symptom but not invariably present. Excoriations frequently lead to impetigo and pyoderma with the hairs matted by the exudate (fig. 8). Cervial lymphadenopathy and febrile episodes may occur. There are usually few adult lice but myriads nits (eggs) cemented on the hairs (fig. 8) are present.

Diagnosis and treatment

Diagnosis is made by identifying oval nits cemented to hairs (initially at their junction with the skin). It can be confirmed by examining the nits under a microscope differentiating nits (fig. 9) from seborrhoeic scales, hair casts and artifiacts.

Several anti-head lice lotions are available in the market.

Malathion (0.5%) (Derbac and Prioderm): This is one of the effective anti-lice lotions available locally.

Pyrethrum (Pyrifoam): Mixtures containing pyrethrum and piperonyl butoxide are effective anti-lice lotions. They have the advantage of being ovicidal.

Gamma benzene hexachloride (Lindane): This is an effective anti-lice lotion but is not available locally because of its toxicity on the central nervous system. However experience from countries where this drug is available indicates that it is safe at the concentrations used in anti-lice lotions.

These lotions should be shampooed thoroughly into the hair and scalp end left to act on the parasites for ten minutes. The hair is then rinsed thoroughly and dried. Remaining nits should be removed with a fine-toothed comb. The shampoo should be repeated after one week to destroy newly hatched lice from unremoved nits as some anti-lice lotions are non-ovicidal.

PEDICULOSIS CORPORIS

Pediculosis corporis is transmitted chiefly by contaminated clothing or bedding. It is the only louse capable of transmitting epidemic diseases in man e.g. louse-borne typhus, and trench fever. Pediculosis corporis is rare in developed countries with high social economic status except in vagabonds and those with low intelligence and poor hygiene.

Early lesions consist of haemorrhagic macules or papules at the site where the louse punctured the skin to obtain blood. Due to intense itching vertical excoriations on the trunk and neck are characteristic. Crusts and serum may stain the underclothing. There are usually few identifiable adult lice (fig. 10).

Diagnosis and treatment

Lice (or their nits) can be found on seams of clothing (particularly in the armpits, beltline, and collars) where they cling while feeding on the human host. Parasites are usually absent on the body except in heavily infested persons.

Treatment consists of health education on good hygiene. Regular changing of clothing and bedding is usually adequate for cure. The clothing and bedding should be laundered and preferrably boiled. Anti-lice lotions mentioned above can be used for occasional nits on the body hair in the same manner as in treatment for ped ediculosis pubis (rarely necessary).

PEDICULOSIS PUBIS

The recent sexual revolution has played a vital role in the transmission of pediculosis pubis. It is often a sexually transmitted disease in adults. Also known as the crab louse, its body is shorter and rounded and distinct from the head and body louse.

As the name implies, the most common site affected is the pubic area (fig. 11). Although the lice do not move much from the initial site of contact, in hairy individuals the thighs and trunk and occasionally the face may be involved. Pubic lice may infect the eyelashes and periphery of the scalp in children. Pruritus is a common symptom. Excoriations may lead to pyoderma. Characteristic, but not always present, are the maculae caeruleae (sky blue spots). These are asymptomatic, bluish or slate-coloured macules located on the trunk and thighs which fade within a few days. They are probably due to altered dermal blood pigments of the infested human, or to an excretion product of the louse's salivary gland.

Pediculosis pubis in the adult may co-exist with other sexually transmitted diseases, and a search for other sexually transmitted disease should be made and serology for syphylis done.

Diagnosis and treatment

Diagnosis is more frequently made by identifying the nits attached to the pubic hair than by idetification of the louse. Although the nits are visible with the naked eye, a magnifying glass will help differentiate nits from kinks and knots on hair, or flakes of sebrorrhoeic dermatitis (which are easily brushed off). Further identification of nits can be made by examining the nits under a low power microscope (fig. 9). Occasionally the brown-coloured crab-shaped louse can be seen clinging to the pubic hair.

Anti-lice lotions used for the treatment of head lice are effective against public lice. Therapy should be preceded by a bath. A thin layer of antilouse lotion e.g. malathion, pyrethrum or gamma benzene hexachloride is applied to the infested and adjacent hairy areas with particular attention to the pubic mons and perianal region. In hairy individuals therapy should include the thighs, trunk, and axillary regions. The lotion is left on the body for 12 hours and then washed off thoroughly in a second bath. Remaining nits should be removed with a fine-tooth comb. One application is usually sufficient if all nits are removed during the initial application, but a second application is recommended after one week to remove newly hatched lice as most anti-louse agents are non-ovicidal. It is not necessary to shave the affected areas although we notice often that patients have shaved away all pubic hair before seeking consultation. At the end of treatment old underclothing, pajamas and bedding should be laundered in hot water and ironed.

Sexual contacts shouls be treated simultaneously. Associated sexually transmitted disease should be sought and if present treated. Uninfested household members need not be treated.

CUTANEOUS LARVA MIGRANS (CREEPING ERUPTIONS)

This is another cutaneous parasitic infestation which presents with characteristic serpiginous eruptions due to the parasite larva creeping under the skin. The causative larva is often not identifiable. The hookworm larvae of animals such as dogs and cat (Ancylostoma braziliense and Ancylostoma caninum) are common causative organisms. The hookworm ova are passed out from infected animals in the faeces and these ova hatch into larvae in warm humid soils. The larvae penetrate the human skin and produce characteristic eruptions. Infection occurs from soil in the garden, farm or beach. Several larvae can simultaneously penetrate different sites of the skin producing multiple eruptions. The disease is self-limiting because man is not the definitive host and the larvae eventually die after several weeks.

Clinical Features:

The larva may invade any skin surface, but the hands and feet are common affected sites. Soon after invasion, minute itchy erythematous papules appear at the site of entry. Two or three days later, characteristic serpiginous, vesicular eruptions develop as the larva starts to migrate (Fig. 12). Several creeping eruptions may occur at different sites of a patient. The lesions are pruritic, and vesiculations with secondary infection along the path of the creeping lesions may be seen. The larva usually lies slightly ahead of the advancing lesion travelling at a few mm to cm per day. The disease is self-limiting, for the larvae have invaded a dead-end host and eventually die, usually after about four weeks.

Diagnosis and treatment

The clinical picture is characteristic. Biopsy is of little value. Eosinophilia may be present.

Cryotherapy (e.g. liquid nitrogen) at a point just ahead of the progressing burrow where the live larva is expected is a standard treatment. Freezing with ethyl chloride spray may be used instead of liquid nitrogen. The effectiveness of such treatment is questioned.

10% suspension of thiabendazole under occlusion for three days has been found effective but this preparation is not available locally. Oral thiabendazole (Mintezol) in dosage of 50 mg/kg body weight daily for three days is also effective. Even without treatment the condition will clear spontaneously after about four weeks.

SUGGESTED READING

Scabies and Pediculosis. J B Lippinocott Co, Philadelphia, 1977. Eds Orkin M, Maibach H I, Parish L C and Schwartzman R.

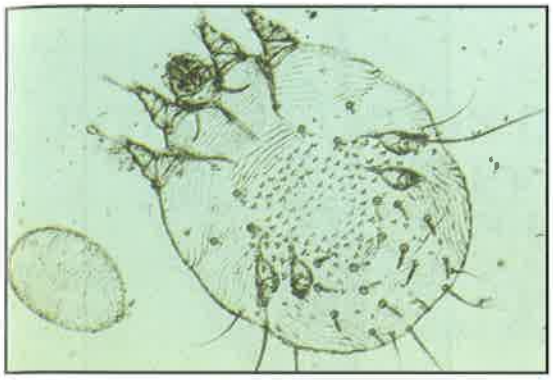

Fig. 1. Adult female Sarcoptes scabiei, ventral aspect and an egg. Only female mite burrows into the epidermis to lay eggs.

Fig. 2. Scabies, eczematised changes on the webs, a common site of mite infestation.

Fig. 3. Papular lesions of scabies, intergluteal folds, another common site of infestation of mite.

Fig. 4. Scabies, papular and pustular lesion on the palms, commonly seen in children.

Fig. 5. Scabies, papular and pustular lesion on the soles. Infected scabetic lesion in a child.

Fig. 6. Norwegian scabies. Crusted asymptomatic plaques are characteristic. Occur in immunocompromised patient only.

Fig. 7. Nodular and papular scabetic lesion, commonly seen on genitalia. Note excoriation and papular lesions on the thighs.

Fig. 8. Pediculosis capitis. Myriads of nits attached to hair on occipital scalp. Note secondarily infected crusted scalp lesions.

Fig. 11. Pediculosis pubis. Nits on pubic hair. Louse normally anchored between pubic hair near skin surface.

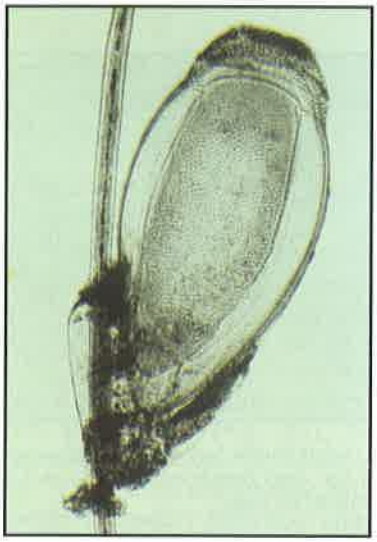

Fig. 9. Pediculosis. Nit cemented on hair shaft.

Fig. 12. Cutaneous larva migrans (creeping eruption). Note serpiginous vesicular lesion on right foot.

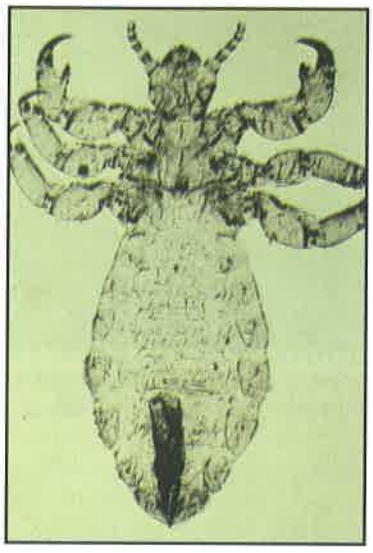

Fig. 10. Head louse (similar to body louse) easily distinguished form pubic louse by its longer body.

HOME STUDY

INTERPRETATION OF THYROID FUNCTION TESTS IN PREGNANCY: AN UPDATE

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INTRODUCTION

Hormonal changes together with the increase of thyroid binding globulin that occur in pregnancy alter the significance of many thyroid function tests. Hyperthyroidism may occur for the first time during pregnancy. If untreated it may progress to a thyrotoxic crisis in the mother or neonatal thyrotoxicosis in the infant. Clinical signs of hyperthyroidism such as palpitations, fatigue and heat intolerance are equally common in an euthyroid normal pregnancy. There are many pitfalls in vigorously treating a single apparently abnormal test in a pregnant patient. Hypothyroidism is commonly diagnosed prepartum and does not present as great a dilemma as the diagnosis of hyperthyroidism in pregancy. This article will dwell on the interpretation of thyroid function tests mainly in relation to the diagnosis of hyperthyroidism in pregnancy.

NORMAL THYROID FUNCTION

Production of T4 and T3

All stages of thyroid hormone production are controlled by Thyroid Stimulating Hormone (TSH). TSH is produced by the anterior pituitary and its release is in turn controlled by Thyrotrophin Releasing Hormone (TRH).

Transport of Thyroid Hormones in Plasma

Thyroid hormones are reversibly bound to plasma proteins and transported in plasma to their sites of action. Thyroxine Binding Globulin (TBG) binds 70% and 80% of the circulating T4 and T3 respectively. Thyroxine-binding prealbumin and ablumin are less important quantitatively. More than 99.95% of circulating T4 and 99.5% of T3 are bound. Only the minute free fraction affects cellular metabolism.

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TESTS OF HYPERTHYRODISM IN PREGNANCY

Serum Free Thyroxine Index (FTI)

This test is widely used as it is easily available to the practising physician. It attempts to correct total T4 changes due to alteration in TBG. The calculation of FTI involves measurement of Total Serum Thyroxine (TT4) and the correction factor is estimated by a T3 resin uptake test.

An alternative form of the index is to measure TBG and calculate a TT4: TBG ratio. In a similar manner to the FT4 index, an FT3 index can be calculated. The FTI is useful where small changes in TBG occur, as in pregnancy or in patients taking oestrogens. In certain inherited conditions marked deficiency or excess of TBG occurs. In these disorders the TT4: TBG ratio is a more satisfactory test. In cases of acute or chronic non-thyroidal illness the index tests are unreliable. They are also cumbersome to perform as each is a two-stage procedure.

Measurement of Free Thyroid Hormones

The measurement of free thyroid hormones is based on the concept that the free rather than the total hormone determines tissue exposure to T4 and T3 activity. Currently commercial kits are available in several countries to determine free T4 levels using labelled-analogue assays. Comparison of total and free hormone assays in the same patient

population has shown that free hormone assays correlate better with the thyroid status of the patient. However analogue tests are not infallible and are subject to false positive results. Hence a group of tests devised to measure end organ responsiveness to thyroid hormones namely TSH assays and the TRH test have gained popularity.

The secretion of TSH by the pituitary bears an inverse relationship to circulating T4 and T3. Measurement of serum TSH particularly with newer sensitive assays facilitates differentiation of hyperthyroidism, euthyroidism and hypothyroidism. In the future, sensitive TSH assays which are able to measure very low levels of TSH will probably supercede all other tests of thyroid function. Unfortunately in the normal pregnant patient lower than normal TSH levels have been constantly found. This may be due to interference in the assay by Human Chorionic Gonadotrophin (HCG) or a genuine reduction in TSH due to the weak thyroid stimulating effect of HCG. Hence low TSH levels in pregnancy should be interpreted with caution and hyperthyroidism confirmed by measurements of FTI, Free hormones or by the TRH stimulation test.

TRH Stimulation Test

The TSH response to exogenous TRH is a reliable index of thyroid function and can be used in the diagnosis of hyperthyroidism during pregnancy. This test is currently available in Singapore. Plasma TSH is measured before and 20 minutes after the intravenous infusion of TRH. If the increment in TSH is less than 1.0 MU/L it is diagnostic of hyperthyroidism. The test is moderately time-consuming and can be performed in the out-patient's department of a hospital under medical supervision.

Conclusion

In conclusion, the accurate determination of thyroid status in pregnancy is important. The careful selection and interpretation of the tests usually determines the successful outcome of the pregnancy and the well-being of the mother and infant. As total thyroid hormone levels are falsely elevated their estimation is of no value. The free thyroxine index gives a satisfactory index of thyroid function in most patients. In doubtful cases the TRH stimulation test should be performed. Free thyroid hormone assays are still unavailable in Singapore for routine use. Finally, as the TBG elevation seems to persist in the post-partum period it is advisable to monitor thyroid function for 6-8 months after delivery using the free thyroxine index rather than total thyroid hormone levels.

REFERENCE

1. Seth L. Beckett G: Diagnosis of Hyperthyroidism: The Newer Biochemical Tests. In: Clinics in Endocrinology and Metabolism. 1985: 14: 373-393.

HOME STUDY

X-RAY QUIZ

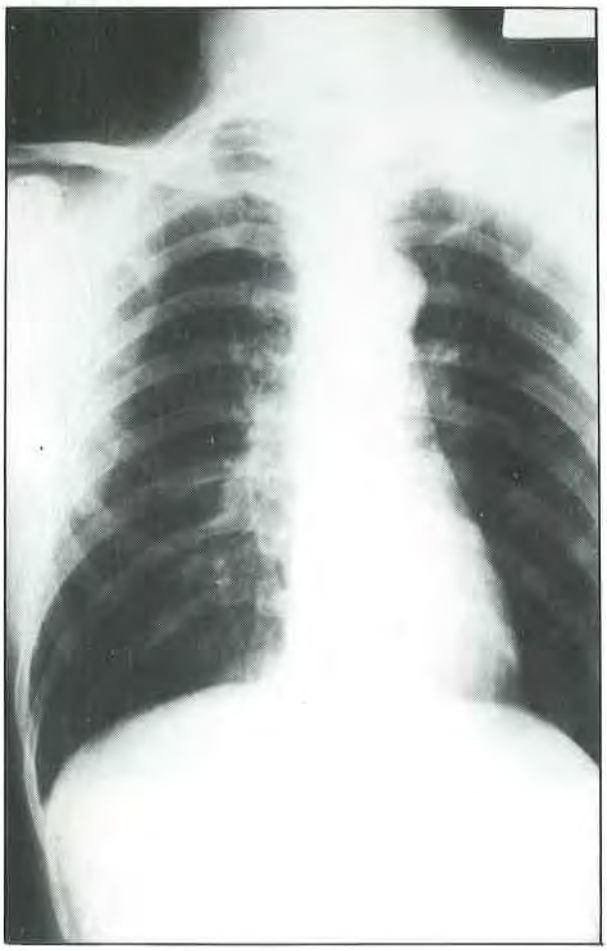


Figure 1

A 73 year old Chinese male presented with generalised weakness on examination, large left cervical LYMPH nodes were discovered. A Chest X-Ray was ordered — Fig. 1.

1) What abnormalities can you see?
2) What is your diagnosis?

ANSWERS

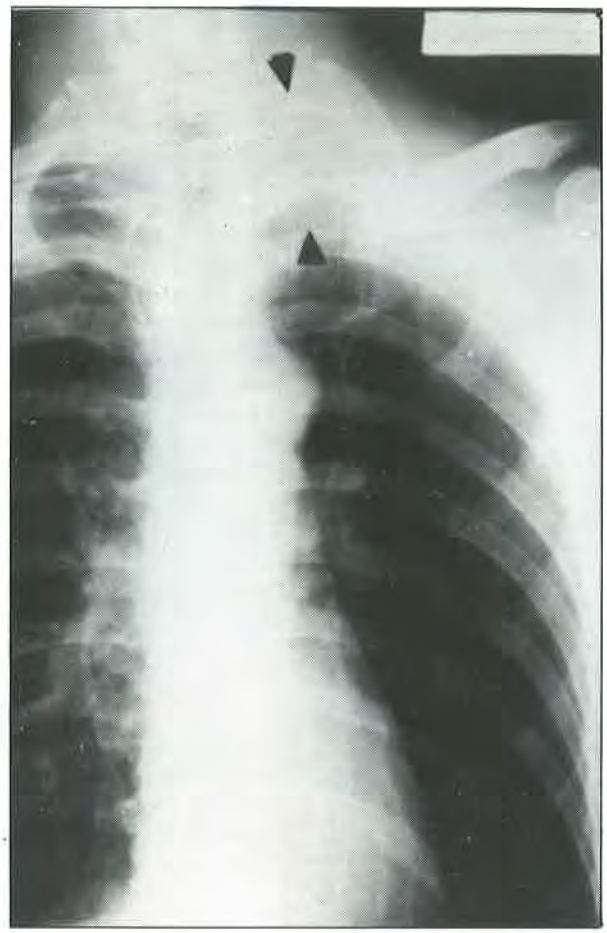


Figure 2

Fig. 2. Shows in detail an opaque left apex with destruction of the 1st, 2nd & 3rd Ribs. These appearances are due to a carcinoma of the left apex.

Diagnosis: Left Pancoast Tumour — Carcinoma of the apex of the lung

DISCUSSION

The radiological appearance is that of a homogenous opacity capping the apex of the lung, more pronounced on the costal aspect. This opacity may resemble a thickened pleural cap. The characteristic feature of a pancoast tumour is bone destruction, usually involving the first three ribs and commencing at the necks. The bone destruction may also involve the thoracic vertebrae.

This early bone destruction may be obscured by the opacity of the tumour. It is therefore mandatory to be able to identify the bones obscured by the opacity. This may be done with penetrated apical views, tomography or CT scanning.

ECG QUIZ

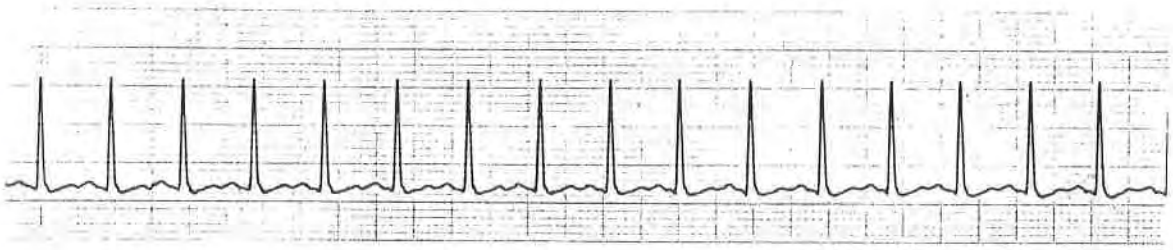
Study the following rhythm strips. In each case,

(a) What is the rhythm?

(b) List the common causes.

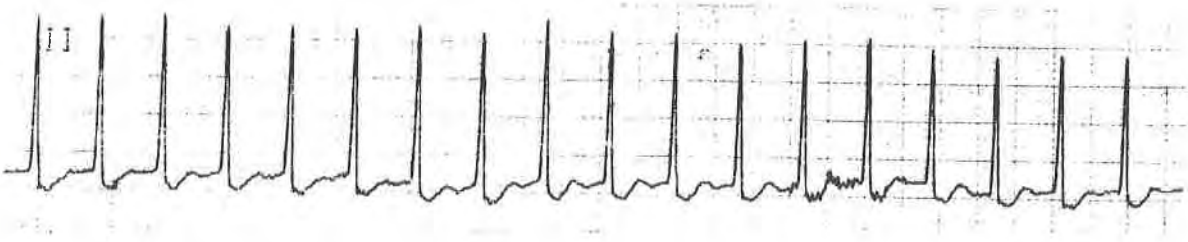
(c) What is the treatment, if any?

Strip 1



Strip 2

Strip 3



This ECG Quiz is contributed by Dr Baldev Singh, MBBS (S'pore), M. Med. (Int Med), MRCP (UK)

ANSWERS

Strip 1:

Sinus Tachycardia

(a) The P waves are clearly seen and every P wave is followed by a QRS complex, i.e. there is 1:1 conduction. The PR interval is constant, and the R-R, i.e. the interval between subsequent R waves of the QRS complexus is regular. These features distinguish it as a sinus rhythm. The rate is about 150/min. When the sinus rate is above 100/min it is by definition a tachycardia.

(b) Sinus tachycardia is usually a physiological response to a demand for an increase in cardiac output and is seen in exercise, fever, anxiety, anaemia, heart failure, and thyrotoxicosis. It also occurs with administration of drugs, e.g. bronchodilators, atropine and excessive caffeine.

(c) The management consists of first identifying the underlying cause and then instituting the appropriate treatment if indicated.

Strip 2:

Atrial fibrillation

(a) P waves are not seen. The baseline is wavy as a result of irregular and simultaneous atrial activity in multiple foci in the atria. The QRS rhythm is irregular and the complexus are narrow. The ventricular rate depends on the refractoriness of the A-V node.

(b) The common causes of atrial fibrillation are: mitral valve disease, thyrotoxicosis, coronary artery disease and hypertensive heart disease. It is also seen in cardiomyopathies, pulmonary embolism, and pericarditis.

(c) The patient should be carefully evaluated to elucidate the cause of the atrial fibrillation. Apart from the usual investigations, an echocardiogram is essential even if one does not hear any murmurs as silent valvular disease and other structural abnormalities may be present.

The goals of therapy should be realistic and tailored to the clinical setting.

(a) If atrial fibrillation is of acute onset and significant haemodynamics embarrassment is present emergency synchronized cardioversion is indicated. This should be followed up with digoxin therapy.

(b) If atrial fibrillation is of recent onset, e.g. less than 6 weeks duration, cardioversion can be attempted. If unsuccessful "chemical cardioversion" with digoxin and quinidine combination can be attempted.

(c) If atrial fibrillation is chronic, the goal of therapy should be to control ventricular response rate. If digoxin in optimal doses does not control the rate, digoxin/quinidine can be tried but care must be taken as quinidine decreases the renal clearance of digoxin and may elevate digoxin levels to toxic levels.

Alternatively digoxin/Verapamil combination can be tried. Verapamil appears to control ventricular response rate better especially during exercise. If there are no contraindication and the patient is fairly young, anticoagulant therapy with warfarin is usually given especially if the heart is enlarged and mechanical obstruction e.g. mitral stenosis is present. This is given in the hope of reducing thromboembolism.

Anticogulation however carries with it significant risks, and it has not yet been clearly shown whether benefits outweight risks. Prospective studies are underway in North America to try to elucidate this.

ensuing P wave) is usually less than 50% of the RR interval. The P waves are usually regular and occur at a rate equal to the ventricular rate, i.e. there is no A-V block. P waves may not be seen in which case they are usually buried in the QRS Complex. A-V nodal re-entral tachycardia is the most common form. Carotid sinus massage may terminate the arrhythmia.

SA Nodal Re-entry

The re-entry mechanism lies in the SA Node and hence the ensuing P waves are morphologically similar to the sinus rhythm P waves and are upright in II, III and AVF. The R-P interval is usually greater than 50% of the R-R interval. A-V block may occur since the A-V node is not part of the re-entry loop. SA Node re-entry is not common. Carotid sinus massage does not terminate the arrhythmia.

Re-entry using Concealed Bypass tract

The features of this mechanism are similar to A-V Node re-entry, however an extra-nodal pathway is used for retrograde conduction to the atria. This pathway can conduct impulses only in a retrograde directioin. Patients with WPW also have an extranodal pathway (bypass tract) but it can conduct impulse in both directions. Hence during normal sinus rhythm, foreward conduction using this bypass tract produces the characteristic delta wave in WPW. Patients with an extranodal pathway capable of conduction only in a retrograde direction are said to have a concealed bypass tract because a delta wave is not seen during sinus rhythm. The 12 lead ECG features during SVT are similar to those of A-V node re-entry and this arrhythmia is often difficult to distinguish from it. However a negative P wave is usually seen in Lead I in patient with SVT due to CBT. Carotid sinus massage may terminate the arrhythmia.

Automatic Atrial Tachycardia

An episode of SVT may result from the rapid firing of an automatic ectopic focus in the atria. This arrhythmia was traditionally called "Non-paroxysmal atrial tachycardia." The ECG characteristics are similar to SA-Node re-entry, with upright P wave in II, II, AVF but the P wave morphology may be slightly different from the sinus beat P wave. The R-P interval is usually greater than 50% of the RR interval. A-V block may occur. Carotid sinus massage will not terminate the arrhythmia, but may increase the A-V block if present.

Treatment

Patients with supraventricular tachycardia are usually anxious and distressed. They should be confidently reassured and sedated if necessary. The patient should be placed on continuous cardiac monitoring and vital signs checked. The BP is usually slightly on the low side, but this does not necessarily contraindicate pharmacologic therapy if administered carefully. If however the patient is haemodynamically compromised, which is very unusual especially in young patients, then emergency synchronized electrical cardioversion is indicated using a low level of energy, e.g. 50 watts sec.

If the patient is haemodynamically stable, carotid sinus massage can be tried for about 10 seconds first on one side and then on the other side. Valsalva manouvre can also be tried.

If these measures fail, the drug of choice is intravenous Verapamil which is successful in over 90% of cases. The BP should be monitored closely and 5 mg of the drug should be given over 2-3 mins. Conversion to sinus rhythm may occur several minutes after injection has been completed and one should wait about 5 mins before giving a 2nd 5 mg dose if conversion has not occurred. A third dose is only very rarely necessary and if indicated must be given even more cautiously and slowly. Before administering any drug one must always check with the patient to see if he is already on oral betablockers. If so extreme care must be taken as the patient can sometimes go into asystole with both betablockers and calcium antagonists on board. (For a further discussion of this topic, please refer back to ECG Quiz in April/June issue)

References: Heger et al, M. Josephson et al, Goldman.

Strip 3:

A-V Nodal Re-entrant tachycardia

(a) This lead II strip shows a regular rhythm with narrow QRS complexus. A careful inspection will reveal inverted P waves closely following each QRS complex. The rate is approximately 175/min. A rhythm of this nature was formerly called "PAT" or "Paroxysmal atrial tachycardia." This term has been dropped in favour of the term "SVT" or "Supraventricular tachycardia." Since the advent of electrophysiological studies much more is known about the mechanism of occurrence of these arrhythmias & by a careful inspection of the 12 lead ECG a more precise diagnosis can usually be made as in this case. The topic is rather complex but I will try to simplify it as I feel it will be worthwhile for family physicians to know more about this.

(b) Re-entrant arrhythmias have been explained by the concept functional and anatomic dissociation of conduction tissue into 2 pathways with different conduction velocities and different refractory periods. The repetitive tachycardia is usually set off by an appropriately timed premature atrial impulse.

Figure A shows an appropriately timed premature atrial impulse arriving at such a microcircuit in the conduction system. The impulse is blocked at the fibre shaded in black as it has a long refractory period and has not had time to recover from the passage of the previous impulse. Hence the impulse travels down the alternate pathway which is a slow conducting fibre and has a short refractory period.

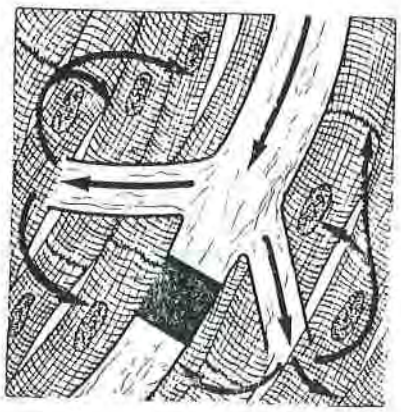


Figure A (Goldman)

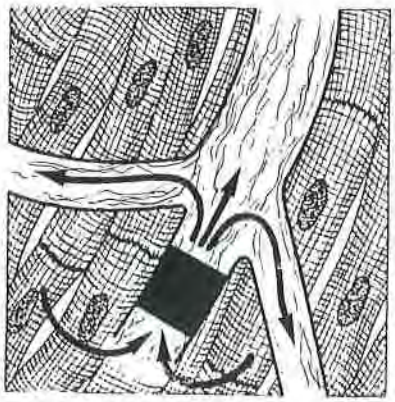


Figure B (Goldman)

However (Figure B) as the impulse traverses this slow conducting fibre the previously blocked fibre has had time to recover and the spreading impulse is able to reach the fibre and gets transmitted backwards and is again able to travel down its original pathway which has a short refractory period and has now recovered. Hence a self perpetuating tachycardia is started.

This sort of re-entry can occur in the A-V Node, SA Node, Atrial tissue, and the His-Purkinje system. In WPW the mechanism is very similar except that it occurs at a macro level, i.e. accessory conduction fibres are present which connect the atria to the ventricles and bypass the slowly conducting A-V node.

How does one tell where re-entry is taking place?

A-V Nodal Re-entry

The pathway for re-entry lies in the A-V node. Each impulse is conducted back to the atria and inverted P waves may be seen in II, III, AVF and these closely follow QRS complexus so that the R-P interval (i.e. the interval between the R wave of the preceding QRS complex and its

NEWS FROM THE COUNCIL

12th College Examination for Diplomate Membership

The 12th College examination was held on:

Sunday, 19 October 1986 — Theory
Sunday, 26 October 1986 — Clinicals (Short Consultations)
Sunday, 2 November 1986 — Clinicals (Long Consultations)

Of the 12 candidates who took the examination, the following nine were successful:

Dr Chan Cheow Ju
Dr Kwan Pak Mun
Dr Lee Kok Leong, Phillip
Dr Lim Shueh Li, Selina
Dr Lim Shyan
Dr Lum Chun Fatt
Dr Tan Heng Kwang
Dr Tan Kok Kheng
Dr Claire M. Viegas

12th Convocation and Dinner & 9th Sreenivasan Oration

These were held at the Shangri-La Hotel, Singapore on Sunday, 9 November 1986. Besides conferring the Diplomate Membership on the nine new graduands, the following presentations were made:

a) **The Albert Lim Award 1986**

Presented to Dr James Chang Ming Yu

b) **Letter of Appreciation**

Presented to Miss Lee Seok Tin
Mr Toh Kian Chui
Dr Jerry Lim Kian Tho
Dr Chan Swee Mong, Paul
Dr Goh King Hua
Dr Lim Kim Leng

c) **Certificates of Attendance (1984/86)**

(Award of second Certificate)

Presented to Dr Chua Bee Koon
Dr Hia Kwee Yang
Dr Hu Tsu Teh
Dr Lee Siew Choh
Dr Leong Kwong Lim
Dr Low Yee Shih
Dr Mohamed Nawaz Janjua
Dr Yang Chien Pai

Certificate of Attendance (1983-86)

Presented to Dr Chan Cheow Ju
Dr Chee Chan Seong, Stephen
Dr Cheng Heng Lee
Dr Chia Kwok Wah
Dr Dohadwala, Kutbuddin
Dr Low Saw Lean
Dr Lum Chun Fatt
Dr Menon, K P R
Dr Ng Kok Teow
Dr Seah Cheng Kiah

Dr Hong Lee Tiong
Dr Huan Meng Wah
Dr Kwan Pak Mun
Dr Lim Geok Leong
Dr Lim Kheng Har, Maureen
Dr Lim Shueh Li, Selina
Dr Lim Shyan
Dr Tan Kok Kheng
Dr Tan Peng Hong
Dr Viegas, Claire Maria
Dr Wee Huat Leong, Peter
Dr Wong Yuen Poh
Dr Yap Soo Kor, Jason

d) **Presentation of Book Prizes** for the Top Medical Students at the General Practice Examination, 1986:

First Prize — Predeebha A/P P N Kannan (Miss)
Second Prize — Choo Henn Tean, Sylvia (Miss)
Third Prize — Wong See Hong (Mr)

2) **Continuing Medical Education Programme**

Internal Medicine Update (2) was conducted from October 24 to December 12, 1986. The programme was as follows:

PROGRAMME

Theme: Current Management In Internal Medicine (II)

24 October 1986	Rehabilitation of the Post Myocardial Infarct Patient	Prof Arthur Tan M. Med., FACC, FRACP (Cardiology)
31 October 1986	Common Cardiac Arrhythmias	Prof Maurice Choo
7 November 1986	Polyarticular Arthritis	Dr Tay Chong Hai
14 November 1986	Gall-bladder Disease	Dr Teh Lip Bin
21 November 1986	Obstructive Airway Disease	Dr Ong Yong Yiau
28 November 1986	Irritable Bowel Syndrome	Dr Ng Han Seong
5 December 1986	Pulmonary Tuberculosis	Dr Lee Siew Khow
12 December 1986	Collagen Diseases	Prof Feng Pao Hsii

Again, the course proved very popular. 174 registered for the course and attendances at all the sessions were quite high.

The next module will be on Obstetrics & Gynaecology and is scheduled to commence in February 1987.

3) **Course in Practical Ophthalmology**

This course is organised by the Department of Ophthalmology, National University of Singapore in conjunction with the College of General Practitioners Singapore. This is a course in the practical aspects of ophthalmology as it relates to the non-ophthalmologist with emphasis on the problem-oriented approach to common eye problems. Hands-on experience in examination techniques, diagnosis and surgical procedures will be highlighted. The number of participants will be restricted to twenty. The course will be conducted on three Wednesdays — January 7, 14, and 21, 1987 and will be held at D Clinic, Conference Room #01-316/317 (next to Outpatient Pharmacy), National University Hospital, Kent Ridge, Singapore 0511, from 2.00 to 5.00 p.m.

4) **New Members**

The following have been accepted by Council into the membership of the College during the months of October/December 1986:

Dr Choo Teck Hong — Ordinary Membership
Dr Chua Yong Han — Ordinary Membership
Dr Kuldeep Kaur — Ordinary Membership
Dr Lim Hock Siew — Ordinary Membership
Dr Tan May Hua — Ordinary Membership
Dr Chua Teo Ngee — Associate Membership
Dr Low Huey Chin — Associate Membership
Dr Wong Yoke Cheong — Associate Membership

DR. EDDIE HO GUAN LIM

A Tribute

Dr Eddie Ho Guan Lim was not a general practitioner, but in many ways he stood with the best of our calling. He had an enlightened overview of the problems of the medical profession, and more importantly he cared and helped those who came to him in need.

Eddie was an internal physician and a medical administrator and although not physically of commanding stature, he was in reality a giant amongst men. He never allowed his high office of Permanent Secretary and Director of Medical Services to stand in the way of those who had come to him for advice or seek the assistance of the Ministry.

In the latter period of a very distinguished civil service career he became Singapore's Ambassador to Soviet Russia, and later our High Commissioner to the United Kingdom. It was perhaps in this calling that his virtues became to be most appreciated. He was always the perfect diplomat. No harsh words ever passed through his lips and if he did not suffer fools gladly, he was at great pains not to show this overtly.

Gentle by nature, soft-spoken by habit, Eddie was someone anyone could speak comfortably to. His wide interests ranged over a number of topics. His friends knew him as a keen athlete in his younger and more carefree days, and also a gardener with green thumbs and an expert at the oven at home. Perhaps one of his lesser known ambitions was to build a boat of his own and go sailing. I remember the time when he spoke of this to me with an exuberance which his normally calm countenance would usually conceal. The last I knew was that the boat which he laboured on with his hands had still not been completed. Like so many thing else in his lifetime, there was so much to be done and so little time to do it.

The College owes him a debt in that he recognised the need for an academic body which our general practitioners could call their own. We did not have to face the bigotry and ignorance from senior members of other medical disciplines when the time came for us to form our own College. Lord Hunt who helped to found the Royal College of General Practitioners in the United Kingdom told me that he once had to face the derision of some of his surgical colleagues. "You might as well start a College for in-growing toe-nails" one told him.

The College has still to establish its credentials with some senior members of our profession, but thanks to far-seeing people like Eddie we have made more headway than would otherwise have been possible. His breadth of vision while he was Permanent Secretary of Health made him see that for the benefit of our people, a good primary health care scheme was essential. As a former hospital administrator he was well aware of the increasing costs of hospital care, and he recognised what should be painfully obvious to most people that pre vention is better than cure, and that it is cheaper and better to treat those in want to medical attention outside the hospital than within an institution.

To his wife, son and daughter who will always miss him more than we ever will, we share their grief. If he had been a good friend of the College while he was with us, he will continue to be so no matter where his next calling takes him to.

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WONCA Regional Conference
Asia Pacific Region
and
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Hosted by: The Hong Kong College of General Practitioners
5th — 9th September 1987
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Registration enquiries are now being accepted for an **important Conference in General Practice/Family Medicine** — the WONCA Regional Conference — Asia Pacific Region which will be held in Hong Kong. **Hong Kong** has everything to make a visit to the Orient specially memorable. The delegates and accompanying persons can enjoy a combination of excellent tours around Hong Kong and China, spectacular culinary dishes and, of course, the endless delights of shopping.

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You are invited to submit original papers on various areas of General Practice and Family Medicine, especially those related to the Conference and session themes, for presentation in:

- **UPDATE SESSIONS**
- **FREE STANDING PAPERS**
- **SPECIAL INTEREST GROUPS**
- **POSTER SESSIONS**

Abstracts of your papers should be submitted before 15th January 1987.

For registration details and further information of the Conference, and Guideline for Preparation and Submission of Abstracts, please contact your local College of General Practitioners/Family Medicine or write to:

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