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Editorial

The behaviour of a doctor towards his patient is of extraordinary importance to society and to the doctor himself. When a person is ill he is at once perplexed by the problem of whether to go to a doctor or not. All men have learned from experience that most illnesses will get better if left alone. Yet men know that dangerous illnesses often begin with minor symptoms and that delay may lead to an unnecessarily long illness, permanent disability or death. It is probable that the decision to consult a doctor early or to refrain from doing so is taken according to the patient's past experience of doctors or to what he has heard about them from his friends. Delay, with all its risks, is often due to the patient's fear that he will be treated indifferently, to fear of disclosing secrets to a man he cannot trust, to fear of being treated in a way harmful to him, in the doctor's interests and not in his own. One might say therefore, that a doctor's good behaviour is an important factor in preventing disease because it enables early diagnosis to be achieved and early treatment to be started.

The Malayan Medical Association, in common with similar associations in the world, demands of its members a good deal more than gentleness and good manners, even though these are very important. Gentleness and good manners are nearly always genuine, naturally present as part of a doctor's character or ingrained into him during his training. But they are also highly developed by confidence tricksters and other scoundrels. A code of medical ethics is a necessary addition to them. Such codes have existed from ancient times. For instance, cut in the stone of the Style of Hammurabi four thousand years ago, are the laws of Babylon which include those governing the conduct of physicians, the fees they were allowed to charge and the severe penalties inflicted on them should they do wrong. The modern doctor may be appalled at the very heavy damages awarded in the courts against doctors for negligence. In ancient Babylon, if your patient died you ran the risk of having your fingers cut off, to encourage you to do better next time. Hippocrates, two thousand four hundred years ago, wrote the famous oath. This oath binds the physician to act in his patient's interest and for the honour of the medical profession. No penalties are mentioned. The doctor is to act in such a way as will be pleasing to the gods. In this oath there is an important omission. The demands made by the State and the Law nowadays were simply ignored by Hippocrates. A doctor's duty was to his patient and to his profession. No other considerations applied.

Our Association is now investigating the whole question of medical ethics as we would like them to be observed in Malaya. A doctor's behaviour is the concern of the medical profession. His actions are often taken by the general public to be typical of the character of us all. Some

time ago accusations of misbehaviour were made against one or two consultants in Singapore. Reports in the newspapers, to avoid mentioning names, simply applied these accusations as if they were proven facts to the body of consultants en masse. Men who had worked hard and honourably in the service of the people of that city found themselves classified in the press as little better than criminals. Such was the result of suspicions directed against not more than one consultant in twenty. We expect this sort of thing to occur again. By establishing an ethical code, of the highest possible standard, we hope to prevent or limit the incidence of such painful reporting. Our members must not only behave well but be clearly seen to behave well.

There is a rule in economics which states that bad currency will drive good currency out of circulation. To some degree this is true of bad behaviour. If there is no accepted code of ethics then there will be danger that deterioration in the behaviour of doctors will occur. This would have disastrous consequences to the reputations of all of us, whether virtuous or not. The consequences to the people of Malaya would be equally serious. Nothing could be more dangerous to them, when ill or injured, than a loss of faith in their doctors.

A tourist in a certain country entered a large hotel. In the reception hall were a number of touts who tried to sell him various things and interest him in tours of local beauty spots and in other more dubious forms of entertainment. Among them was a man who thrust a doctor's card on the tourist. The tourist's reaction was to decide that if he had the misfortune to need medical attention, he would fly to some other country to get it. He would hope to find a medical profession there that did not demean itself by touting for business.

We may shudder at such behaviour from a doctor and applaud the tourist's good sense. But how does such a situation arise? It arises gradually. Small faults become accepted as normal. Serious misdeeds soon follow. In the end the whole profession is shamed in the public eye. A code of medical ethics points out the faults before they are committed. It influences doctors to behave well. It warns the weaker ones that certain specified actions will earn the distrust and disapproval of their colleagues. It helps to ensure that the patient's interests will be guarded and that he will be treated as a gentleman by a gentleman.

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OBSTETRIC LIMITATIONS IN GENERAL PRACTICE

BY

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It really gives me great pleasure tonight to talk to you, the General Practitioners' Association, on Obstetric Limitations in General Practice, and yet I feel that by so doing I am putting myself into the position that at a subsequent meeting, a speaker, who is a General Practitioner, may well wish to describe the obstetric limitations of hospitals. I would be the first to admit that there are obstetric limitations in hospitals, and that these could well be discussed. But it is important to remember that, although we work in apparently separate compartments we are nevertheless two branches of a unified profession, and our aim in obstetrics is to secure the birth of a healthy live baby and, if possible, to improve the health of the mother during the months of pregnancy when she is under our care. This is our common aim but the conditions under which we work to achieve this end are different.

I remember, as a newly qualified doctor, hearing a Professor of Obstetrics and Gynaecology asking a group of doctors their opinion of a case. The general consensus of opinion was that the patient's unfortunate condition was probably the result of the lack of treatment she had received from a general practitioner. One student was very outspoken about this and was briskly reprimanded by the Professor who said: "Young man, when you have attended the birth of a breech in a small cottage with only the aid of a Hurricane lamp to help you, and with five children yelling through the thin wall, you will not be so ready to criticize the general practitioner." If I make any criticisms tonight I hope you will remember that I am very conscious of the remarks made by that Professor of Obstetrics and Gynaecology to that doctor.

How then do conditions vary, and what are the limitations of obstetric practice outside hospital? Naturally, the conditions will vary from country to country and where the number of doctors is high in relation to the number of patients, and so where the general practitioners are able to devote much more time to each patient the limitations will be less. Medicine is a fascinating and mentally rewarding profession but since we have to live, to clothe and to feed our families we have to think of the financially rewarding aspects too. Obstetric care undertaken in general practice is not only time consuming, but relatively poorly paid. It is far more lucrative to treat a fever or an acute medical disorder than it is to undertake the care of a woman through the ten months of pregnancy and then attend to her, often at much personal inconvenience, during the ten hours, or more, of labour.

A further limitation in Malaya is that many of our towns have too many people crowding into too few houses. In these houses sanitary facilities are often elementary and proper conditions for domiciliary confinement are almost unattainable. In the rural areas it is, of course,

different, and it is here that perhaps the general practitioner can give the most valuable service. But unfortunately all too few of you work in the rural areas.

There is, in Malaya, as in most other countries, a tendency for the patient to seek hospital confinement. This applies particularly to town people, and I am in agreement with it for I am convinced that hospital confinement is safer for the mother and in many ways better. I will agree that home confinement in certain selected cases is valuable, as the mother is then able to deliver her baby in an atmosphere she knows and away from the more rigid institutional atmosphere of a hospital. But when you consider the dangers of prolonged labour, of a difficult delivery and of postpartum haemorrhage and the suddenness with which death can occur, hospital confinement has much to commend it. Perhaps the solution would be to allow general practitioners into hospital so that they may continue the care of their patient in hospital. This has been suggested in Britain but I do not think that it would be practicable today in Malaya. In this connection I must state that I distrust, and disapprove, of small maternity homes and private clinics where few patients are delivered, and where facilities are not always adequate. I do not like them because they have neither the advantages of the hospital in efficiency, care, and safety, nor the advantages of the home for delivery in familiar surroundings. They are often dirty, sometimes dangerous and occasionally death traps.

Having got that off my chest perhaps we may talk of specific instances in which obstetric care is limited in general practice. The first of these is perhaps controversial, and that is the care of the patient who threatens to abort. Most of you, I am sure, feel that when a patient threatens to abort she should be treated with bed rest, and injections of progesterone. It is this latter method of treatment that I would like to criticize. Some years ago a survey was carried out in America to determine the cause of a large number of abortions. The surprising finding of this survey was that the majority of abortions were of damaged ova and that no drug or other treatment would have helped.

In only 3.5 percent of cases was it concluded that there might have been some advantage in giving female sex hormones in an effort to improve the chances of survival of the foetus in the uterus. This may be put in another way. Swyer and Daly in England treated two groups of patients who had had two or more abortions previously. One group of 60 patients received bed rest and progesterone; and the second group of 53 patients were treated with bed rest and reassurance, and no other drug. There was no statistical difference in the number of live babies delivered by the two groups.

The evidence of the value of injections of progesterone seems to me to be very flimsy, and indeed recent work indicates that if progesterone is to be given the daily dose should be at least 100 mg. a day, or, should one of the norethisterones be used, the equivalent dose. Disturbing reports have appeared following the use of these latter drugs and some

children have undergone partial sex reversal in utero. Moreover, these drugs are very expensive, and until there is a national health service in Malaya, (which is never free as some would believe, but would cost the citizens of the country a considerable sum) the purchase of these drugs in the doses required must put the cost well beyond the finances of most of your patients. I would, therefore, suggest to you that if you wish to treat the case of threatened abortion you should put the patient to bed, tell her to stay in bed and to avoid intercourse. Since the patient will require something more than just your reassurance, I would suggest that you use a sedative rather than a hormone. Your results will be just as good; for you must remember that 20 percent of all pregnancies end as an abortion whether you give treatment or not.

Should the patient pass the danger of abortion and should the pregnancy continue, further hazards await her in the second and third trimester. These hazards can be circumvented by diligent attention to antenatal care, and this diligent attention can be given by the enthusiastic general practitioner, probably better than it can be given by a busy hospital. I must admit our faults in respect to antenatal care. The hospital clinics are far too busy and the process of antenatal care is far too much a mechanized procedure, one which resembles an industrial assembly belt rather than a sympathetic consideration of the patient's needs. In general practice, if you have an interest in obstetrics and wish to conduct obstetric care, the encouragement which these patients so much require can be given and the problems which affect them in pregnancy can be dealt with sympathetically and individually. This sympathetic approach is the basis of all Grantly Dick Read's suggestions. Of course he was an enthusiast and he carried his suggestions too far. But the basis of his theory is a good one — a relaxed patient in labour leads to a relaxed cervix and a shortened period of painful contractions.

In the months preceding labour the rapport developed between the doctor and the patient does much to ensure this relaxation, but it does mean that the doctor must have time to discuss her problems with his patient. She should be seen at frequent intervals, for not only is it the doctor's duty to increase his patient's confidence in her ability to deliver her baby, but also he must detect the dangers I noted earlier and treat them. The three main dangers are those of the presence of anaemia, the onset of pre-eclamptic toxaemia, and antepartum bleeding, which may be due to one of several causes.

The presence of anaemia in a pregnant woman can be a matter of serious consequence, particularly in Malaya where anaemia is widespread. The average haemoglobin level of patients attending the hospital clinics in Kuala Lumpur has been found to be 60 percent. Severe anaemia in pregnancy may lead to premature labour, to an aggravation of the severity of postpartum haemorrhage and is a contributory factor in many cases of maternal death. Pregnant women who attend for antenatal care must be tested for the presence of anaemia. It will be found that almost all patients are suffering from nutritional iron deficiency anaemia and a proportion (which is probably no more than 1 percent) will also

be suffering from megaloblastic anaemia. The treatment of anaemia is simple: it is to give iron by mouth in the first instance, and if necessary later to give iron by intramuscular injection. If it is considered that the anaemia is megaloblastic, folic acid should be given for 10 days in a dose of 10 mg. twice daily. The oral iron should continue throughout pregnancy and it doesn't matter which particular kind of iron salt is given provided that the equivalent of 25 mg. of utilisable iron is given daily. The amount of utilisable iron in the common commercial preparations varies between 15 and 20 percent, so that to obtain 25 mg. of utilisable iron a varying amount of iron salt is required. Of the commonly used iron preparations the following dose is needed:

Ferrous fumarate - -	365 mg.
Ferrous sulphate - -	600 mg.
Ferrous gluconate - -	1,000 mg.
Ferric ammonium citrate -	7,000 mg.

The use of liver injections in the treatment of anaemia is not only costly, but of no benefit whatsoever.

Much has been written about the care of the patient in order to avoid pre-eclamptic toxaemia. But the main thing to note is that albuminuria is a late sign and it is always preceded by a rise in blood pressure and usually by oedema. Thus it is that the sphygmomanometer is a more valuable instrument than is the test tube or the pelvimeter. If you have any pelvimeters in your surgeries I feel you can well dispense with them or give them to your children for drawing circles in the dust. They have little of other value.

The sudden gain of weight in a pregnant woman is a dangerous sign and should be watched carefully. Nowadays when chlorothiazide drugs are available, patients who were previously sent to hospital can be treated at home by you, but they must be seen weekly in case a sudden increase in blood pressure occurs, and if there is any deterioration they should be sent to hospital. And the patient whose blood pressure exceeds 140/90 should always be referred to hospital. Until we know the cause of pre-eclampsia we can only treat the symptoms, and there is no doubt that symptomatic treatment is more successful in a hospital than it is in the home.

The problem of antepartum haemorrhage is much more serious. Even today, all too often, we receive patients in this hospital who have been examined vaginally by general practitioners because of bleeding in the last three months of pregnancy. I would like to ask you to consider the dangers of the vaginal examination of a patient bleeding in the last three months of pregnancy. By examining such a patient in your surgery you may start a sudden severe haemorrhage which may prove fatal. Vaginal examination of the pregnant patient who is bleeding in the last trimester should never be done except in a hospital which is equipped with full facilities for all obstetrical operations. If this talk has no effect other than to prevent such examinations it will have served its purpose.

It is only in recent years that adequate attention has been paid to the ten months of pregnancy rather than to the ten hours of labour, and the spread of antenatal care has been slow. Most women in the countries of the world are conservative in outlook and unwilling to change their views. So it is that many of those who most require antenatal care do not seek its benefits. You all know the type of woman. She is large in figure, and loud in voice, the former because of her frequent pregnancies, the latter because of the need to control her many children. She has no time for antenatal clinics or for doctor's attentions, as pregnancy, like the income tax demand, is an annually recurrent affair, and her last ten pregnancies were all easy. The dangers of this are all too evident from the deaths we have had in Kuala Lumpur in the last five years. Between 1953 and 1958, 27,500 patients were delivered in the maternity wards of the General Hospital, and of these 132 died. But of the 22,000 patients who had received antenatal care only 39 died, whereas of the 5,348 patients who did not attend antenatal clinics 93 died, ten times as many. In 50 of the deaths the major factor leading to the death was lack of co-operation by the patient in that she did not attend the clinic, or if she did, did not follow the advice given. But a change is occurring and more and more emphasis is being placed on the value of antenatal care.

Should the dangers of the antenatal period be passed the dangers of labour may even be greater and perhaps the limitations of obstetrics in general practice are best shown by difficulties in labour. Good antenatal care will diminish but not eliminate these difficulties and the question is at what stage should you seek specialist help. To discuss this fully would take far more time than I have at my disposal tonight, but I would suggest the following rules which you might wish to consider:

(1) No labour should last more than 24 hours without a further opinion being obtained. In general it is wise to transfer a patient whose labour has lasted 24 hours or more to hospital.

(2) The old rule you were taught as students that the foetal head should have engaged in the pelvis of a primigravida by the 37th week of pregnancy still stands. Should you encounter a primigravida at the 37th week whose baby's head has not yet engaged in the maternal pelvis, please refer her to hospital. The reason for the non-engagement may be a simple one, such as a posterior position of the vertex, but it may be something much more sinister, such as contraction of the pelvis. Pelvic assessment cannot be made satisfactorily in the surgery. I know for I have tried it myself!

(3) As women have more children their babies tend to get larger and the fact that a woman has delivered a baby weighing 7½ lbs. previously does not mean that she can deliver a baby of 9 lbs. She is a possible candidate for disproportion. Such a patient must be watched very carefully if labour is to be conducted outside hospital.

(4) Most drugs as well as being beneficial may be dangerous. An example is oxytocin. Pitocin (oxytocin) should not be used in obstetrics except in a physiological intravenous drip. The use of

injections of Pitocin intramuscularly to stimulate or to induce labour is dangerous. Only two years ago we received from an estate hospital a patient who had been in labour for three days. The labour had been slow and the contractions poor. The hospital assistant, taking on the responsibilities of the doctor, decided to stimulate the labour and promptly gave 10 units of pitocin intramuscularly. One hour later the patient was brought to hospital moribund. The sudden injection had been followed by tumultuous contractions which had succeeded in rupturing the uterus. There was little we could do when she reached us except to see her comfortably to Heaven.

(5) The safe delivery of a breech baby is a matter of personal skill and of practice. The safest way to reduce the mortality of breech deliveries is to have experienced doctors working with a team of experienced nurses. Since it must be difficult for those conditions to be found in general practice I would recommend that all patients whose baby presents by the breech should be delivered in hospital.

(6) The only kind of forceps delivery which should be attempted outside hospital is a low forceps delivery. In such a case the foetal head is presenting at the vulva and the occiput has rotated to the anterior-posterior diameter of the outlet. Mid-forceps should be avoided as it may be very difficult and certainly requires as much skill as a Caesarean Section. Moreover, mid-forceps requires the use of general anaesthesia, and general anaesthesia in the home or in the small nursing home can be dangerous. During labour the stomach emptying time is delayed and many patients feel it necessary to fill their stomachs with rice to find the energy for the strain of parturition. When a general anaesthetic is given this rice may be vomited and some of the vomit may be inhaled into the lungs. Such inhaled vomit may well cause death. A general anaesthetic is not needed for low forceps delivery which can easily be effected under a pudendal nerve block. This method of anaesthesia should be taught to all students and practitioners. It is the only anaesthesia which should be used in domiciliary practice, unless an emergency occurs when a general anaesthetic is needed, or if the practice is too far away from a hospital for specialist aid to be obtained.

Finally, there is the problem of postpartum haemorrhage. All too often I am sure you are called out to see patients who have been delivered by a midwife, or more frequently by a friend or relation, and who have postpartum haemorrhage. The placenta may or may not be in the uterus. Until it is possible for us to have an obstetric flying squad I would recommend that these patients are given an intramuscular, or intravenous, injection of Ergometrine and are transferred to hospital. Postpartum haemorrhage kills more patients in Malaya than any other single cause. Most of the deaths are due to mis-management of the 3rd stage of labour. Where the patient is being delivered by a doctor there is a great deal to commend the practice of using ergometrine intramuscularly, or intravenously, with the birth of the baby's head. Following the birth of the baby (which must be undertaken slowly) and having

made sure that the child is breathing properly, a hand on the fundus will show that the uterus has contracted strongly and that in most cases the placenta has separated and is lying in the lower segment. By the combined use of fundal pressure and of gentle cord traction the placenta can be brought into the vaginal. At this point the hand which is placed on the fundus should be placed suprapubically and upward pressure exerted upon the uterus, whilst cord traction is maintained. The uterus will move upwards and the placenta will move outwards appearing at the vulva. This method will prevent much postpartum haemorrhage. Used by general practitioners it should be a very great safeguard against the dangers of postpartum haemorrhage and the new method is a valuable indication that obstetric limitations in general practice are not static, but change as advances occur in obstetrics.

Can one sum up? I think so. The hospital obstetrician starts his care of the pregnant woman with many advantages. Behind and beside him he has all the ancillary facilities available. He can call easily upon the advice and experience of others; he can discuss his problem readily. He works in a team. In general practice you are alone, you have none of these advantages, and in consequence your anxiety must be increased if everything is not quite normal.

The parturient woman can give rise to great anxiety. And to those of you who care for them in general practice, I offer my admiration — but I wouldn't change places with you, for I don't think I could cope!

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NOTES ON A CASE OF COINCIDENT INTRA-UTERINE AND EXTRA-UTERINE GESTATION

BY

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A patient, Yew Peck Toh, female Chinese, 34 years old, was admitted into the District Hospital, Klang, on 18.7.1960, being referred by a private Medical Practitioner, Dr. Chong Soon Fong, with complaints of bleeding per vaginam, and lower abdominal pain since the morning of the 18th July, 1960.

Following are the history and findings:—

Patient has been married for five years.
Menstrual history — regular (20 – 30 days cycle).
Past obstetric history — Gravida — 3. Para 2.
Abortion — 1 (2 months in February, 1960 — spontaneous and uneventful).

Age of last child — 3 years.
L.M.P. May 1960.
History of twins in family or self — NIL.
History of leucorrhoea — NIL.
Past history of V.D. — NIL.

On Examination

General condition : Slightly anaemic. Nutrition — good.
Pulse : 94 p.m.
Respiration : 22 p.m.
Temperature : 99.4 F.
B.P. : 124 m.m. of Hg.
88

Abdomen Tenderness on deep palpation on lower abdomen. No rigidity or muscle guard.

P.V. Examination

Outlet — Lax.
Vagina — Pale.
Cervix — External Os — admits just tip of index finger.
Internal Os — closed.
Soft in feel.
Central in position.

Uterus — Size of ten weeks.
Culs — Right — clear,
Left — slight tender resistance felt.

Examination of other systems: N. A. D.

Diagnosis: Threatened abortion.

Treatment: Rest in bed.
Inj. Proc. Penicillin 300,000 units b.d.
Mist. Pot. Bromide 0z I t.d.s.

Day to day follow up

19. 7. 60 Temp. settled down to normal.
Pulse came down to 84 p.m.
B.P. 124 m.m. of Hg.
88
No bleeding p.v.
No complaints.

20. 7. 60 Condition same.
Patient looks better.
Pulse — 84 p.m. B.P. 120 m.m. of Hg.
88

21. 7. 60 No complaints.
Patient looks fit.
Discharged from hospital with advice, for rest in bed and Phenobarb Tab. Gr. ½ b.d. for one week.

On 21st July, 1960 patient came back with a letter from another Medical Practitioner, Dr. Lim Sian Lok, suspecting Ectopic pregnancy. Patient was immediately admitted into the hospital. She complained of severe abdominal pain and bleeding per vaginam, since the night of 20th instant.

On Examination General condition: shocked and anaemic. Pallor +
Pulse 104 p.m.
B.P. 120 m.m. of Hg.
70
Temp. 99°F.
Abdomen: Extremely tender especially over the lower abdomen.
Rigidity of lower abdomen +
Rebound tenderness of lower abdomen +
Height of fundus not felt.

P.V. Examination

Outlet — Lax.
Vagina — Pale.
Os — Internal Os admits Index finger. Product of conception felt.
Soft in feel.
Extremely tender.
Uterus — Size of ten weeks.
Retroverted and retroflexed.
Appears flattened antero-posteriorly.
Culs — Left tubo-ovarian mass felt which was tender also.
Right — clear.
Pouch of Douglas — slight bulging felt, soft in feel and tender.

Examination of breasts Veins are dilated on the surface of skin with slight clear secretion on expression of breasts.

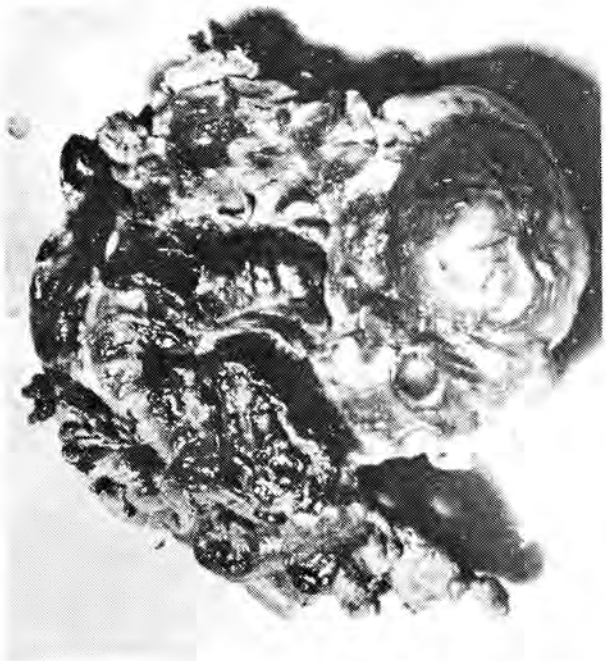
Other systems: N. A. D.

Laboratory Examinations

Total white count:	10.800 c.m.m.	
Differ. count:	Poly	— 80%
	Lympho	— 18%
	Mono	— 1%
	Eosino	— 1%
Hb.	65%	
Blood group	"O"	

Provisional Diagnosis: Ruptured Ectopic gestation with ? Intra-uterine pregnancy threatening abortion.

Treatment decided upon: *Laparotomy:* Laparotomy was performed under spinal anaesthesia (*Cinchocaine* 4 c.c.). On opening peritoneum, dark altered blood and blood clots were found in lower abdomen especially on the left side of pelvic cavity and pouch of Douglas.

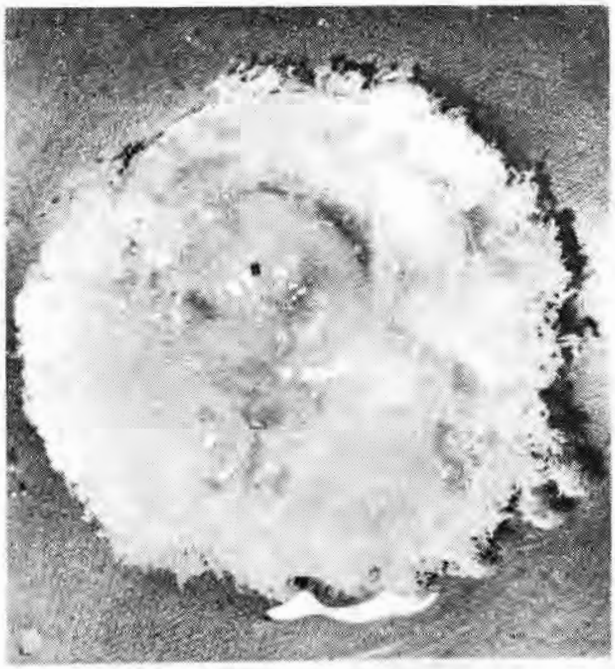


PHOTOGRAPH NoI

I. Tubo-ovarian Mass.

A left tubo-ovarian mass adherent to the left ovary and pelvic colon was seen. The tubo-ovarian mass was dissected out, clamped and removed along with the left ovary. A big raw area was seen in pouch of Douglas after removal of the tubo-ovarian mass and the blood clots, suggesting the invasion of the pouch of Douglas by the chorionic villi.

The uterus was found to be retroflexed and retroverted, and enlarged of ten weeks size. It was flattened antero-posteriorly, and soft and flabby in feel. Hysterotomy was decided upon as the signs and symptoms of inevitable abortion were apparent. Products of conception were removed and a foetus of ten weeks size in an intact amniotic sac was found. Uterus was sutured in layers.



PHOTOGRAPH No II

Foetus from Uterus.

Naked eye examination of the isthmus of left Fallopian tube showed no sign of old inflammation or stenosis. Right Fallopian tube and right ovary were found to be normal. Other abdominal viscera were normal.

Abdomen closed in layers with rubber tube drainage as there was oozing of blood from the raw area in the Pouch of Douglas.

Post Operative Treatment

Blood transfusion, Inj. Achromycin 500 mgm I.V. to start with and then 250 mgm six hourly, Inj. Largactil and Inj. Morphia when necessary.

Post operative recovery and convalescence were uneventful.

Discussion

The patient was first admitted on 18th July, 1960 with the signs and symptoms of threatened abortion. She responded to treatment and rest, and was discharged from hospital after a few days as the vaginal bleeding and pain in the lower abdomen subsided. There was no suspicion of Ectopic pregnancy at that time.

On the 21st July, 1960 patient came back with signs and symptoms of Ruptured Ectopic pregnancy. Pain in the lower abdomen was severe with some bleeding per vagina. It was confusing at first to find a gravid uterus at the same time with signs of inevitable abortion. However there was no doubt that there was haemorrhage in the lower abdomen due to a ruptured Ectopic. Laparotomy was decided upon and it was confirmed that there was a ruptured tubal pregnancy on the left side. From the nature of the blood it was found that the rupture might have taken slowly for the past few days.

Implantation of the ovum was upon the fimbriae and the ovary was firmly adherent to the mass as shown in the photograph No. 1.

Hysterotomy was decided upon as the internal Os was dilated one finger (suggesting inevitable abortion). The uterus was bulkier than it should have been in a normal ruptured Ectopic pregnancy. Normal globular shape of the uterus was also lost. In view of the past history of vaginal bleeding which was moderately severe and in presence of the signs of inevitable abortion a hysterotomy was done. The foetus in utero of about ten weeks size is shown in photograph No. 2.

The remaining portions which included the isthmus and interstitial parts of left Fallopian tube after removal of the tubo-ovarian mass were found normal. There was no sign of inflammation in the right Fallopian tube, ovary, uterus or pelvic adenexa. Other pelvic and abdominal organs were normal.

To exclude the routine causes of tubal pregnancy, patient's and her husband's blood for Kahn were done and were found to be negative. Past history of septic abortions or puerperal sepsis have been excluded. Patient led a normal and healthy married life before admission to Hospital. Husband gives no history of venereal disease. His prostatic smear for Gonococcus was negative.

So far no record of a case of coincident intra-uterine and extra-uterine gestation has been found in the Medical Journal of Malaya and hence my decision to publish this case.

I take this opportunity to acknowledge my sincere thanks to my colleagues, Dr. S. K. Mitra and Dr. Lim Sian Lok who had encouraged me to write this paper and had taken the trouble of giving me their valuable advice and help. I am also grateful to the Director of Medical Services for his kind permission for publishing this.

P.S. — Photograph No. 1 shows the fimbriated end of the left fallopian tube with L. ovary firmly attached to it. The products of conception were mostly dissected out during the operation and are not shown in the photograph.

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THE USE AND ABUSE OF THE BIOPSY

BY

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The high degree of specialisation in modern medicine has made it essential that there should be a close co-operation between the clinician and his colleagues in the laboratory or the x-ray department. While this is fairly easy to obtain in large hospitals, where there is a chance of arranging meetings, and telephone conversations are a simple matter, the situation is different in Malaya, where specimens sometimes have to be sent long distances, and the opportunity of discussion does not exist.

In such a situation, it then becomes vital that as much relevant information as possible should be supplied with the specimen when it is submitted. This applies to any type of specimen, whether for biochemical, haematological, or bacteriological examination, but it is particularly important in the case of the surgical biopsy.

While the biopsy is one of the most valuable single laboratory investigations, it should be realised that there are definite disadvantages to offset the advantages, and these disadvantages are greatly increased when the pathologist has to study the material without the information that may be so necessary.

The advantages of the biopsy are of course fairly obvious. It may, and frequently does, confirm a suspected diagnosis or reveal conditions that are hitherto unsuspected. Combined with the use of the various 'scopes', it may avoid the necessity for laparotomy or other major surgical procedure. The development of the needle biopsy technique is of considerable value in liver disorders, and is used to advantage in other organs.

The limitations of the biopsy are, however, not so clearly realised. Usually, only a small fragment of the lesion is taken, and this may not be a truly representative fraction of the whole. Thus it is difficult, and sometimes impossible, to give a definite negative report, as when it is required to exclude malignancy, a fairly frequent request. For instance, a biopsy of an ulcer of the buccal mucosa may show simply inflammation and hyperplasia of the squamous epithelium, while in another area there may be frank carcinoma.

In dealing with inflammatory lesions, it is sometimes possible to demonstrate organisms, as in lepromatous leprosy, but it is no substitute for a proper bacteriological examination. Similarly, in conditions such

as the leukaemias, biopsy of, say, a lymph node, is not so helpful as a proper haematological examination, though a bone-marrow biopsy may be valuable.

Hydatidiform mole should be mentioned in particular, as it is fairly common in Malaya, and is always a cause for anxiety owing to the likelihood of it being the forerunner of choriocarcinoma. It is important to realise that examination of adequate curettings after delivery of the mole is more likely to give an indication of possible malignancy than examination of the mole itself, although unfortunately it is by no means a certain method.

Also, there is a certain risk involved in taking biopsy specimens from highly malignant tumours, although of course where there is no alternative, and there often is not in this country, the risk has to be accepted.

So far as the relevant details are concerned, there are some which apply to all specimens, and others which apply only to particular specimens. Some indication of what these should be follows:—

General

The age, sex and race of the patient are fundamental, and also the history, particularly the duration of symptoms and signs; and the site of the lesion, described as accurately as possible and giving if possible the tissue it arises from; e.g. skin, bone, subcutaneous tissue, etc.

Skin

It is important to know whether the lesion is single or multiple, and in the case of a suspected carcinoma, whether there is any history of a previous lesion such as a burn of ulcer. It is also a help to put forward a tentative diagnosis, as the histological appearances of many skin lesions are non-specific, and may or may not be consistent with the clinical findings.

Bone and Joints

The x-ray appearances are of particular value, and there are many lesions that cannot be diagnosed with certainty without them. In connection with this, it is useful to know whether the lesion is in the epiphysis or diaphysis, and whether it is single or multiple. The possibility of metastases should be borne in mind.

Lymph-nodes

Enlarged glands are commonly submitted for examination, and it is helpful to know whether the enlargement is confined to a single gland or group of glands, or is generalised. If metastases are suspected, it is a good thing to mention the likely site of the primary growth. In cases of generalised enlargement, it is better to avoid the inguinal nodes,

as they are likely to be distorted by inflammation and scarring. Lymph-node biopsies in suspected leukaemia are not always helpful, but if one is done, then the details of the blood-count should be sent with the other information.

GYNAECOLOGY

The endometrium is the tissue most frequently seen by the pathologist, and the majority of these specimens are submitted from cases of 'functional' haemorrhages, so that the date of the last menstrual period is of great significance. It is also the information most frequently omitted.

When writing down the relevant details, it is not necessary to go into details of treatment, except in a few special cases, such as suspected thyrotoxicosis, when it is useful to know if pre-operative treatment has been given, or specific infections, such as tuberculosis, where specific treatment may alter the appearances. This does not apply to haematological specimens, when details of treatment are vital.

A few well-chosen words are all that is necessary, e.g.:—

> "Male, Chinese 17.
> Six months pain, swelling lower end left femur, rapidly growing.
> X-ray suggestive of osteo-sarcoma".

Such a history is much more use than this:—

> "Male, Chinese, ?.
> Swelling left leg, not responding to Antibiotics."

or,

> "Female, Malay, 25.
> Three months amenorrhoea, L.M.P. 23/9/60. Three days bleeding p.v. with lower abdominal pain."

is much more use than this:—

> " ? ", Malay, 25.
> Bleeding p.v., curettings."

On the whole, the use of initials and abbreviations should be avoided, as they are likely to lead to confusion. A few such as L.M.P., Cx., or P.T.B. are well-known, but what is one to make of 'osteo', N.G. or S.O.B.?

Finally, a legible signature, or even a personal 'chop' would be a great advantage, as reports could then be sent direct, instead of through an impersonal general office, with a decreased chance of the report becoming mislaid; and also, if it is necessary to telephone on account of urgency, direct contact can be made immediately.

Some tips on sending biopsy specimens may not be out of place. If they are at all large, they should be sliced open at about 1 centimeter intervals to allow adequate fixation. There should be at least five times as much formalin as there is specimen. Fluids sent for cytological examination should also be diluted about five times with formalin.

It should be remembered that although it is easy to put soft, unfixed tissue into a bottle, even one with a narrow neck, it can be, and often is, exceedingly difficult to get it out after a day or two in formalin; and the tissue has sometimes to be cut up, or the container broken, to do it; so that receptacles of adequate size should be used. The bottles must be carefully labelled and should check with the accompanying request form.

SUMMARY

Ideally, liaison between the clinician and pathologist should be as close as possible. In Malaya, where Pathology is very largely centralised, personal contact has often to be replaced by the written report. The importance of adequate relevant details sent with the specimen is stressed.

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THE RELAXANTS

BY

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Mode of action

Motor nerves to voluntary muscle terminate in motor end-plates applied to the muscle fibres. Between these two is a membrane with different electric potentials on each side of it.

When a motor impulse arrives at the end-plate, acetylcholine is released. As a result of this the electric potential difference across the membrane disappears ("depolarization") and an electrical wave spreads from it throughout the muscle, causing it to contract.

Curare blocks the action of the acetylcholine on the end-plate, competing with it for a place on the end-plate molecules, and so is called a "competitive blocker". Gallamine (Flaxedil) acts in the same way.

Scoline, on the other hand, causes depolarization of the end-plate membrane (hence the description "depolarizing" group of relaxants) and this does not produce, as one might expect, a sustained tetanic contraction of the muscle, but renders it inexcitable so that nerve impulses produce no effect.

Thus we have our two groups of relaxants — the competitive blockers like curare, and the depolarizers like scoline (suxamethonium).

Antidotes

Acetylcholine does not normally survive for long in the body, being destroyed by cholinesterase. If neostigmine is given this destruction is prevented and has the same effect as if a much larger quantity of acetylcholine were produced. Thus the acetylcholine is helped in its "competition" with curare and the effects of the latter are reduced.

It will be seen however, that the action of scoline, a depolarizer, will be helped by acetylcholine and thus by neostigmine, so that neostigmine is no antidote (quite the reverse) to scoline. Fortunately, the action of scoline is brief so that the lack of an antidote is less important. It is destroyed naturally in the body by " pseudocholinesterase " which may rarely be deficient in some people, so that artificial respiration for many hours may be necessary.

Doses required for complete paralysis and duration of action

The practice of using small doses and allowing the patient to breathe on his own is all very well in experienced hands but the respiration is already depressed under anaesthesia and the practice is very dangerous and best avoided. Either use the relaxants fully, with endotracheal intubation and "controlled respiration" or do not use them at all. All doses are intravenous.

Curare: (d-tubocurarine chloride, "tubarine", "curarine") has 10 mg to each cc and in a man of 10 stones about 30 mg (2 ampoules) will be necessary. The effect will last about 40 minutes on an average and if a longer period of relaxation is required a supplementary dose of about 1/3rd of the original dose should be given and then a similar period of paralysis should follow. D-tubocurarine works in about 4 minutes. Ether in particular, but also fluothane and other inhalational anaesthetics, will potentiate the action of curariform drugs and as little as 1/3rd of the usual dosage may suffice.

Gallamine ("Flaxedil") is supplied in ampoules of 80 mg (2 cc) and 120 mg (3 cc), the latter is about right for a 10-stone man. This will produce paralysis lasting for about 20-30 minutes and the supplementary doses should be about 40 mg when it begins to wear off. Again, less is required in the presence of ether, etc. The drug takes 2-3 minutes to work.

Scoline is supplied in ampoules of 2 cc containing 100 mg and usually this is given to a 10-stone adult though 75 mg is probably enough. The effect lasts from 5-10 minutes and may be prolonged by giving increments of 10-25 mg every 5-10 minutes through a Gordh or Mitchell needle or a syringe strapped in place. Paralysis which is particularly profound and so useful for intubation is heralded by muscle fasciculation and is complete in $\frac{1}{2}$-1 minute.

Use of Neostigmine

There are two strengths of solution but the commonest contains 2.5 mg to each cc. and this should be regarded as a "full" dose. Only on rare occasions when the improvement with 2.5 mg has been very good but some weakness remains do I exceed this dose and 5.0 mg must be regarded as rather dangerous dose. Usually I expect to finish the operation with the relaxant worn off, the last dose having been given an hour or more previously and then, when the patient is breathing (and usually awake) I give 0.5 – 1.25 mg to complete the recovery. All doses of neostigmine are preceded by atropine (both drugs being given intravenously) at an interval of at least two minutes. This is because neostigmine slows the pulse, lowers the B.P., causes increased salivation and overaction of the gut in addition to the desired effect and these parasympathomimetic effects are first blocked with atropine. About 1/100th grain preceding 1.25 mg of neostigmine is about right, but sometimes a supplementary dose, say gr. 1/200 will be necessary if the pulse slows to less than 60 per minute. If it is hard to strike a balance it is better to overdo the atropine.

"Controlled respiration"

This is usually performed by squeezing an anaesthetic bag and then relaxing it so that the pressure varies between 10 – 20 cm of water and atmospheric pressure — intermittent positive pressure respiration ("I.P.P.R."). The positive pressure phase compresses the heart, venae cavae and the vessels in the lungs themselves, reducing cardiac output, so it should be fairly "short and sharp" though not jolting and followed by a rest period $1\frac{1}{2}$ times to twice as long. If the BP falls for no obvious reason see that you are not breaking this rule. In controlled respiration the ventilation (volume of each breath rate of respiration) needs to be about twice as great as for the same patient breathing on his own, due

to the abnormal haemodynamics produced. Since hypoventilation is indisputably dangerous, and since the only effect of hyperventilation is alkalosis which clinically seems to do no harm in anaesthesia, see that you tend to err on the side of hyperventilation. Also, since washing out the CO_2 in this way removes the respiratory drive, and possibly for other reasons, less relaxant and less anaesthetic will be required. In chest operations lasting 2 – 3 hours I usually give one dose of curare at the beginning and then N_2O. O_2 only, except for pethidine occasionally; but of course tense abdominal muscles do not matter in such a case so long as the patient is not coughing or breathing. In abdominal operations it is often unnecessary to have absolutely flaccid recti after the initial exploration and for the closure 50-100 mg of thiopentone will usually give enough extra relaxation. If you must use 50-100 mg of scoline for this, do be sure that the curare or flaxedil has worn off or you may be faced with apnoea and be uncertain as its precise cause. On the other hand, to use scoline for intubation and then to continue with curare or flaxedil is almost universally accepted, and provided one awaits the first sign of destruction of the scoline (usually a twitch of the abdominal muscles as one squeezes the bag) before injecting the curare, is very safe.

During artificial respiration using relaxants very little addition to N_2O and O_2 is required, after the premedication and initial dose of thiopentone, to maintain unconsciousness and analgesia. Sweating or a rise in pulse and blood pressure may be due, for instance, to pulling on the peritoneum in an abdominal operation and small doses of pethidine will usually deal with this. 10-25 mg intravenously may be required every 15 minutes or so. Pain reflexes may also produce reddening of the sclera or tear-formation.

Sweating, a rise in pulse rate (followed by a fall), and a rise in BP may mean that the soda-lime is exhausted. When in doubt, change it. Also the closed circuit, with basal oxygen only, is not really safe and one should use, to be safer, high flows of gases even with soda-lime. I use at least 2 litres of N_2O to 1 litre of O_2 and often 4 litres to 2. The relaxant makes it possible to use higher proportions of oxygen if required. In a bad risk case and if anything goes wrong, say a severe fall in BP or cardiac arrest, use pure oxygen. Even if the patient shows some apparent awareness, he rarely remembers it in such cases.

Intubation

One may inflate a patient's lungs with a face mask and with the jaw held well up and forward to lift the tongue from the posterior pharyngeal wall; a pharyngeal airway may also be needed, either because the tongue is large or the nasal airway not patent. The latter is common and should be thought of, a lubricated airway should be on hand. After giving the relaxant, oxygen should be given in this way until relaxation is complete. Press down the emergency oxygen button or lever and ventilate the lungs, observing the movement of the chest wall. Then, with the back of the head on a small firm pillow, extend the head so that the face is looking towards you as you stand at the head of the table. Open the mouth, and guard the lips from being trapped with the forefinger and thumb of the right hand and gently insert the blade of the Mackintosh (curved blade) laryngoscope with the left hand until the tip rests between the epiglottis and the back of the tongue. Finally lift (do not lever) the lower jaw upwards so that the head appears to hang from the blade of your

laryngoscope. The cords, or at least the posterior half of them, should be clearly visible, and if they are not, do not continue struggling to get the tube in somehow, but get someone more experienced to check your technique. If your efforts are not immediately successful, give the patient a few breaths of oxygen from the mask before trying again: do not wait until he is cyanosed. If you are still unsuccessful do not be too proud to ask someone else to "have a go". And give some more oxygen while you are thinking about it. In many cases it would be wise to continue without intubation at all, rather than damage the cords. The only snags are that one may inflate the stomach, especially if a good airway is not maintained, and that stomach contents may regurgitate silently into the pharynx and so into the trachea.

There is bound to be someone who can coach you in the gentle art of intubation. Unless you have attained a reasonable proficiency you should not be using the relaxants. All the people who now appear so dextrous with a tube have had their red-faced clumsy moments. They will be glad to reduce the embarrassment for you and spare the patient a very sore throat indeed.

Two further points about intubation. If the tube goes down too far it will probably intubate the right main bronchus. An unsuspected one lung anaesthetic may cause carbon dioxide retention, even if oxygenation on a high oxygen atmosphere is achieved. Secondly, do not inflate the cuff more than is necessary to stop the throaty gurgle of escaping gases when the bag is compressed. Occasional decompression during the anaesthetic will give the sorely tried tracheal mucosa a better chance to survive uninjured.

Which relaxant to use?

I suppose the likely duration of the operation is the main consideration, but there are some special advantages and disadvantages you should know about.

Scoline produces post-operative aches and pains, particularly in the back; these are worse if the patient is soon ambulant. They occur in about 50% of cases. If scoline is used intermittently for a long operation, monocholine — a break down product — may be present in sufficient quantity to produce a curariform block and be perplexing and therefore dangerous. If the drug is used sensibly this is very unlikely to occur. After the initial dose, give small increments — say 10 to 25 mgm. — through an indwelling needle. Do not give them until there is some slight sign — abdominal movement, diaphragmatic twitches, swallowing, frowning, etc. — of returning muscle function. Record the time and the amount.

Intermittent scoline is especially applicable to the sick, aged patient with bowel obstruction or in any case where the normal electrolyte balance is disturbed. I once had to pump the bag for three and a half hours after using flaxedil in such a case. Avoid curare and flaxedil for them.

Scoline is suitable for babies, but the intubation of small children is difficult because of anatomical differences, quite apart from mere size. No matter how good you are at intubating adults, do not teach yourself

how to intubate the small fry by trial and error. Get some coaching. Scoline may be given intramuscularly, mixed with hyaluronidase. It is slower in onset and less certain. One can usually find a vein.

A slight rise of blood pressure and slowing of the pulse is common with scoline, especially after a second or third dose. It is not important.

The relaxation obtained with scoline is more profound — hence its use for intubation — than with normal doses of curare or flaxedil. Its rapidity and brevity of action are equally important.

Curare is the oldest of the relaxants and is probably still the most used. Its rather long action may be an advantage. There are two points one should bear in mind. Firstly there may be a release of histamine leading to bronchospasm. In a normal adult I use phenergan 50 mgm, well diluted with 10 cc. of water to counter this. Phenergan is usually successful in a minute or two. Secondly there is some ganglion blockade. This affects the sympathetic more than the parasympathetic so that a fall in blood pressure is not uncommon. Unless the positive pressure phase of ventilation is excessive the fall is seldom severe. It responds to raising the legs.

Flaxedil has one principal disadvantage. It raises the pulse rate and thus reduces the time for cardiac filling during diastole. It is a little unpopular for long operations on "cardiac" cases. However, it acts against the vagus, unlike curare, and therefore lessens the risk of bronchospasm. It is useful for asthmatics. If you must use a sub-apnoeic dose with spontaneous respiration (which is probably depressed enough already) 40 mgm of flaxedil is said to affect the diaphragm less than a corresponding dose of curare.

Incompatibility

It is best to wash each drug through the indwelling needle (I like Gordh's needle) or through the drip. Thiopentone and flaxedil are miscible. Thiopentone and scoline are not but I do wash thiopentone through with my dose of scoline. There is a form of curare which is miscible with thiopentone, but it is not so stable as the ordinary form. Pethidine is miscible with atropine and with phenergan, but of these three, only atropine is miscible with thiopentone. Apart from these examples, I always wash each drug through separately with water or saline.

Persistent apnoea

The operation is finished, the last dose of relaxant given an hour ago and nitrous oxide-oxygen has been replaced with pure oxygen for the last five minutes. Still the patient shows no sign of breathing on his own. What is to be done? Do not be in a hurry to do anything. Check the patient's colour blood pressure and pulse. Gently lift his eyelid and inspect his pupils for size, equality and expression. Sometimes you will be met by an enquiring wideawake stare from a patient who is quite satisfied with your respiration and just doesn't know it's all over. In such a case, speak to him reassuringly, put a sucker down the tube and withdraw both together after deflating the cuff and removing any packs.

Check your record of the anaesthetic drugs used and the time given. Do not attempt to neutralise any relaxants until the patient makes some movement. The character of this movement may give you some help. Has too much pethidine or morphine been used? If so ten mgm. of nalorphine (lethidrone) intravenously will antagonise one sixth gr. morphine or one hundred mgm. pethidine. But be careful; if more lethidrone is given than is required it will produce a morphine like effect itself. Pethidine depression of respiration commonly shows itself as a slowing of respiration, perhaps to 4 – 8 respirations per minute. There is little loss of depth of breathing and none of the jerkiness of relaxant action.

A gentle wiggle on the tube, or deflating the cuff will sometimes start the patient off swallowing and then coughing and breathing.

If you have over-ventilated and washed out the carbon dioxide, so that there is no urge to breathe, do not wait idly for the carbon dioxide to build up for minutes at a time. The patient needs a few good breaths of oxygen each minute while waiting. Don't allow the patient to stop breathing for a longer period than you yourself can hold your breath.

If you feel you must try something, 4 cc. nikethamide intravenously will often stir a sluggish patient. Once a few minutes of this expectant treatment has gone by, and if the patient's condition is otherwise satisfactory, you must resign yourself to continuing adequate ventilation with oxygen or oxygen and air until movement or respiration returns. When in doubt do nothing but this. Do not be prodded by some impatient colleague into giving neostigmine to a completely motionless apnoeic patient. You will only confuse yourself and may make matters worse if the apnoea is due to scoline sensitivity.

When the relaxant has worn off sufficiently, respiration will begin. Give the patient oxygen at first, not room air, until you are satisfied his breathing is adequate. It will not be smoothly flowing from expiration to inspiration but jerky, "rectangular" in form and accompanied by downward jerking of the thyroid on inspiration (tracheal tug) or even by sucking in of the upper chest. The patient may make weak, fretful, futile movements of his hands or head. This twitching is very characteristic. Intravenous atropine gr. 1/100th. followed by neostigmine 2.5 mgm. when the pulse has accelerated, will produce either complete return to normality or so much improvement that a suitable further dose to complete the cure can be estimated. If no improvement occurs, carbon dioxide retention may be present. Such retention not only causes coma, it also paralyses the myoneural junctions, mimicking curare. In the presence of a high oxygen atmosphere, carbon dioxide retention can easily occur without cyanosis. Even if the diagnosis is wrong the treatment of carbon dioxide retention can do no harm. Hyperventilate through fresh soda lime with a good flow of oxygen; 15 – 30 minutes of this will usually produce a great improvement. The patient may make vigorous attempts to take the tube out. Do not give him more anaesthetic drugs or relaxants. Continue the ventilation until his recovery is complete. Then watch him for half an hour or so. He may lapse into unconscious-

ness again. Do not take out the tube until you are quite sure he has recovered. Hyperventilate him again if he relapses. Two or three periods of half an hour each may be required. Finally see that he is carefully watched for the next 24 hours and any lessening of consciousness (the first sign) reported to you.

Is the patient safe to return to the ward?

In an uncomplicated case, the patient in good condition and breathing spontaneously, one should look for definite evidence that the relaxants have worn off before returning him to the ward. If he is conscious, ask him to open his eyes and to raise his arm off the bed. If he can do these things his muscular power is satisfactory. If he is half awake and his jaw is clenched so tightly that you cannot open it easily, or if he is pulling strongly at the sucker with his hand, obviously his muscles are working well. If he is unconscious he should be breathing smoothly, inspiration should be accompanied by chest expansion with no tracheal tug and the abdominal muscles should be tense before he returns to the ward. There should be no cyanosis.

Contraindications

There are hardly any contraindications to the use of a suitable relaxant. Myasthenia gravis must be remembered. If it is suspected, 2 – 5 mgm. curare or 10 – 20 mgm. flaxedil is given. These small doses will have no effect on a normal person. If myasthenia gravis is present the patient will be unable to open his eyes or may even require artificial respiration.

Emphysema is a common enough condition. It may make positive pressure respiration impossible, as in severe cases the lungs expand but fail to collapse. The chest stays inflated and fine wheezing is heard on expiration as air is trapped in the alveoli. Sometimes positive-negative respiration with a bellows may be more satisfactory although excessive negative pressure only makes matters worse by collapsing the bronchi. Broncho-dilators such as atropine, phenergan or aminophylline may help. If one appreciates the situation early, before the scoline for intubation has worn off, one can usually struggle on until breathing returns. If the pre-operative examination reveals emphysema, of course one should avoid artificial respiration, but a degree of emphysema which seems minimal in the ward may be much worse under anaesthesia. If the degree of emphysema is mild, beware of carbon dioxide retention under controlled respiration. It is easier to oxygenate such a man with high oxygen atmospheres than to remove his carbon dioxide because of the altered ventilation and circulation of blood in the emphysematous lung.

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THYROID ENLARGEMENT IN BATU PAHAT DISTRICT

BY

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The subject matter on which I base this talk has been compiled from cases seen by me between the months of July 1958 to May 1960, a period of 23 months. The figures are not at all complete, as not all cases in the District come for treatment, and many go down to Johore Bahru, without ever having come to this Hospital for preliminary investigation. Nevertheless the cases reported here have been clinically investigated by me. They do not give a true percentage of Thyroid enlargements in the District of Batu Pahat.

Simple Goitre					Thyrotoxic Goitre				
Sex		*Race*			*Sex*		*Race*		
M.	F.	Mal.	Chi.	Ind.	M.	F.	Mal.	Chi.	Ind.
2	2	–	2	2	–	12	3	9	–
4					12				

Exophthalmic Thyrotoxic					Adenoma Thyroid				
Sex		*Race*			*Sex*		*Race*		
M.	F.	Mal.	Chi.	Ind.	M.	F.	Mal.	Chi.	Ind.
1	4	–	5	–	–	9	2	7	–
5					9				

Nodular Goitre with toxic manifestation					Thyroglossal Cyst				
Sex		*Race*			*Sex*		*Race*		
M.	F.	Mal.	Chi.	Ind.	M.	F.	Mal.	Chi.	Ind.
–	1	1	–	–	–	2	–	2	–
1					2				

Cancer Thyroid				
Sex		*Race*		
M.	F.	Mal.	Chi.	Ind.
1	—	—	1	—

1

Total Thyroid enlargements	=	34
Percentage of Malays.	=	17.6%
,, ,, Chinese.	=	76.5%
,, ,, Indians.	=	5.9%
Male Percentage.	=	11.8%
Female Percentage.	=	88.2%

Average age. 25 – 30 years.

Cancer Thyroid. 57 years of age.

The enlarged thyroid gland in childhood and goitre in adult are the result of the body's efforts to maintain thyroid hormone production whenever dietary iodine is insufficient, or when goitrogenic substances in food stuffs prevent the utilization of iodine by the gland. Such enlargement is prevented by the administration of extra iodine. Genetic factors influencing the synthesis of thyroid hormone may also cause thyroid enlargement, but such conditions are rare. The enlarged gland in adolescence is often regarded as a normal physiological response because it diminishes and disappears at about the age of 20. There is no doubt however, that, in regions where the incidence of enlarged thyroid gland in adolescents is high, goitres also occur more often in adults.

The District of Batu Pahat extends from Minyak Beku in the west to Yong Peng in the East and from Semerah in the North to Rengit in the South, an area of about 600 square miles, and has a population of nearly 200 000 inhabitants. The Town of Batu Pahat, the Headquarters of the District has a population of about 44,000 people. The amount of Iodine in the soil and circulating water is not known, but a level below 3 to 5 micro gram per litre is generally regarded as goitrogenic. (Mc Clendon and Williams 1923). Again if the calcium content of the water is high, such water is believed to interfere with the utilization of Iodine. (Taylor 1958).

The main sources of Iodine in the dietary, apart from sea fish, are milk, vegetables, and cereals. The iodine in drinking-water contributes to a lesser degree directly but also influences the iodine content of locally grown farm produce. Of the 100 to 150 micro gram of Iodine needed

daily to maintain good health, about one-half to one-third may be derived from milk. Sea foods are readily available, and also supply a large part of the Iodine necessary for the body.

The work of McCarrison and others indicates that dietary factors, other than iodine deficiency, are also concerned in the production of goitre. Diets deficient in the fat-soluble vitamins and in Vitamin C appear to be conducive to its development. The ingestion of excessive quantities of fat or protein (especially of liver) also predisposes to it. Members of the Brassica family, (e.g.) cauliflower, Brussels sprouts, etc. are also goitrogenic. Cases of goitre in man resulting from a diet containing a large proportion of cabbage have been reported. This is due to the high cyanogen content in vegetables of the Brassica family. The goitrogenic effect of cyanides is dependent upon their property of depressing tissue oxidations, increased Thyroid function being a compensatory reaction instituted to oppose this action.

The possibility of infected drinking water in some instances, plays a role in the development of goitre. It is also possible that certain micro-organisms in the intestinal tract may reduce the quantity of iodine absorbed from the food.

Goitre is a generic term which may be applied to almost any non-inflammatory and non-malignant swelling of the thyroid gland. They may be classified as follows:—

A. Simple goitres. These are unaccompanied by constitutional factors. They are subdivided upon a histological basis into 3 groups.

   (1) Colloid (diffuse).
   (2) Parenchymatous (diffuse).
   (3) Adenomatous (nodular).

B. Goitres associated with a deficiency of the thyroid hormone (hypothyroidism).

   (1) Cretinism.
   (2) Myxoedema.

C. Goitres associated with an excess of the thyroid hormone (hyperthyroidism).

   (1) Exophthalmic goitre.
   (2) Toxic adenoma.

Diffuse Colloid Goitre

The alveoli are large, distended with colloid and lined by low cuboidal or flattened epithelial cells. The iodine content per gramme of gland tissue is low.

DIFFUSE PARENCHYMATOUS GOITRE

Hypertrophy and multiplication of the cells lining the alveoli, with great reduction in the amount of colloid material are characteristic features of this type. The epithelial cells are high columnar. The iodine content is low, much less than 0.1% of its dried substance. The quantity of iodine in the normal human thyroid is about 2 mgms per gram of dried tissue; the average total store in the gland is from 10 to 15 mgms: A content below 1 mgm per gram of dry gland, is indicative of definite thyroid abnormality.

ADENOMATOUS GOITRE

As a result of the formation of isolated tumour like masses of thyroid tissue (adenomata) the glandular enlargement is asymmetrical or nodular. The minute structure of the adenoma may resemble a section of colloid or of parenchymatous goitre, or it may undergo cystic changes. The alveoli may be unusually small contain little colloid and resemble foetal thyroid tissue. The iodine content of the nodule may be normal or high, while that of the rest of the gland is usually low.

Enlargement of the thyroid gland may occur at puberty, or during pregnancy. A certain degree of thyroid enlargement at these times is physiological.

EXOPHTHALMIC GOITRE

The gland usually shows a picture typical of parenchymatous goitre, i.e. hypertrophy and hyperplasia, its iodine content is low. The blood iodine is elevated. The blood supply of the gland is greatly increased, the rush of blood through the superior thyroid arteries often produces a loud bruit or a distinct thrill. In addition to this thyroid enlargement, the chief features of the fully developed condition are:

(a) Accelerated pulse 100 to 160 per minute; cardiac dilatation and hypertrophy; auricular fibrillation; flushing of the skin, and moistness of the palms, feet and other exposed parts of the body.

(b) Nervous excitability.

(c) A fine involuntary tremor.

(d) General muscular weakness.

(e) Protrusion of the eyeballs, widening of the palpebral fissure due to retraction of the upper lid, tremor of the closed lids and sometimes palsies of ocular muscles may occur.

(f) Increased metabolic rate to varying degrees up to 80% above normal.

(g) Wasting.

(h) Nitrogen and calcium excretion increased with rarefaction of the skeleton.

(i) Disturbance of carbohydrate metabolism as is evidenced by hyperglycaemia, glycosuria and reduced sugar tolerance.

TOXIC ADENOMA

A simple adenomatous goitre may undergo increased functional activity and produce the features of pure hyper thyroidism. In toxic adenoma the rest of the gland is usually atrophic.

I have not touched on cretinism and myxoedema as I did not come across any such cases in this Hospital. They do not fall within the category of Thyroid enlargement on which this paper is based.

Chatin from 1850 to 1860 carried out some of the first scientific investigations into the relationship between iodine and goitre; he showed that the iodine content of the soil, water and air of goitrous districts was very low. He attributed the thyroid enlargement to this deficiency, and recommended iodine administration as a preventive. Goitre is not usually seen along the sea-board; but cases do occur, as is shown in this report. The sea contains an inexhaustible supply of iodine which has been leached from the soil. Sea water contains about 0.02 mgms of iodine per litre; fresh water, as a rule, very much less. The further away from the ocean, and the more mountainous the country, the lower is the concentration of iodine in the food and water, and the higher in consequence is the incidence of goitre. The employment of small amounts of iodine in goitre districts has proved to be a preventive measure of the utmost value. Many preparations of table salt have this essential added in a proportion of 1 part in 10,000. Once goitre has become established iodine administration is of much less value but, as already mentioned, a hyperplastic parenchymatous goitre may be converted to the less severe colloid type.

Iodine in the form of lugol's solution (Iodine, 1 grm; potassium Iodide, 2 grms; water 30 c.c.) 10 to 40 minimums daily, is invaluable in the treatment of exophthalmic goitre. The symptoms abait, there is a pronounced fall in the Basal metabolic rate and the danger of a thyroid crisis is reduced, or if a crisis has commenced, it may be ameliorated or checked.

Thiourea, and thiouracil, propyl thiouracil, methyl thiouracil, and neo-mercazol, depress thyroid hormone production and lower the metabolic rate. Other compounds, (e.g.) Sulphonamide drugs, potassium thiocyanate and amino benzine compounds, including para-amino benzoic acid also inhibit thyroxine production.

These drugs when administered to cases of thyrotoxicosis, produce a functional or chemical thyroidectomy. They induce thyroid hyperplasia, together with a low metabolic rate and other evidence of hypothyroidism. They prevent the oxidation of the iodide to iodine. They do not inhibit the action of thyroid hormone upon the tissue cells.

From a recent survey of thyroid enlargement among schoolchildren in North Oxfordshire. Taylor (1958) in discussing the evolution of toxic goitre from simple nodular goitre has pointed out that the cost to England of not using iodised salt must be immense if calculated in terms of the demands made on the medical services by the loss of working-time. This may be true also of Malaya.

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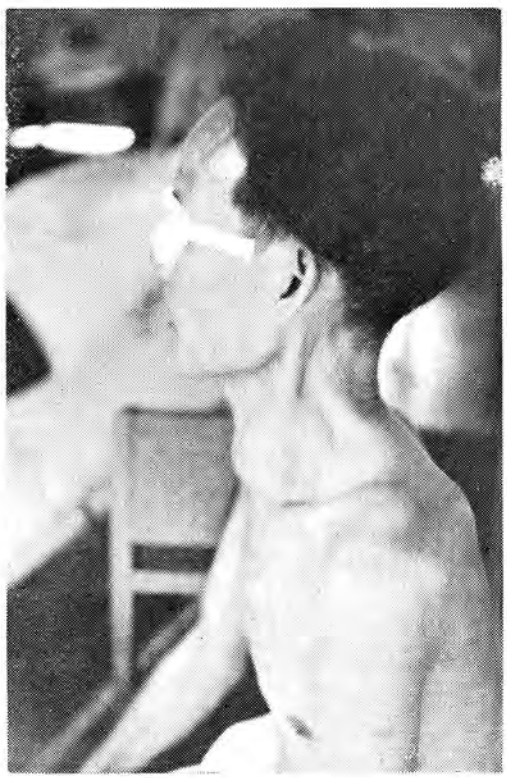
Nodular Goitre.
Woman aged 34 years.



Cancer Thyroid gland. Man aged 57 years.

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LEPROSY

A Reprint of the Survey made in 1924 - 1927

BY

PROF. H. C. DE SOUZE-ARAUJO, M.D.

7. FEDERATED MALAY STATES

Since 1893 there exists in Malaya an ordinance regarding the control of leprosy. The total number of its lepers is estimated to 1,600. Two kilometers distant from Kuala Lumpur, the capital of the country, is situated the "Kuala Lumpur Leper Asylum", a very old establishment about to be closed.

I visited it with Dr. Richard Green, its medical officer in charge.

The establishment is an old fashioned asylum, rather like a prison built in the center of a piece of ground surrounded by a fence of ten barbed wires.

The asylum consists of about 15 buildings which majority are brick-pavilions, covered with tiles and with ground of concrete. The sewers and drains for waste or rain water are also cemented.

Since 1925 the asylum shelters 500 lepers, all Hindus and Chinese. The institution is overcrowded and the patients have no comfort at all. I saw there Chinese lepers lying on mattresses, doing nothing except smoking opium, this being tolerated as a relief to their suffering.

In Pulau Panjkor, there exists a small asylum with some fifty lepers. These ones used to live with their wives, from whom, death only can detach them.

By the time of my visit, the erection of an up-to-date colony for lepers was planned, 20 kilometers distant from the capital.

I could not more have the pleasure to meet Dr. E. A. O. Travers in Kuala Lumpur. This colleague used, from 1922 to 1925, the treatment known as "Tai Foong Chee", the active principle of which is the flour of the seeds of *Hydnocarpus anthelmintica*.

In 200 cases under treatment, of one to two years duration, improvement was obtained from 70 to 81%, negative attempts being in the proportion of 11.5%. I ascertained this was the unique treatment used in the Kuala Lumpur Leprosarium by the time of my visit.

Travers (1) describes as follows, the preparation of the Chinese formula and its way of being applied. It is a mixture of the seeds of the following plants:

Tai Foong Chee (*Hydnocarpus anthelmintica*) -	2 parts
Pak Chut Lai (*Tribulus Terrestris*) - - -	1 part
Toh Man Yan (*Cannabis Indica*) - - -	1 part

The daily dose of these flours is half a drachma, or say, more or less a teaspoonful, to be taken with a little water. This is the classical Chinese treatment of leprosy. Travers, having verified its efficiency, generalized the use thereof, thus modifying the recipe:

Flour of selectioned seeds of *Hydnocarpus anthelmintica*	3 parts
Idem of *Cannabis indica* - - - - -	1 part

The seeds of *Tribulus terrestris* was deemed as of no benefit. The dose was increased to 2 teaspoonsful a day, one in the morning, another one at night.

Ministering this remedy is most easy. All the patients are placed on a row in the yard of the Asylum. A nursing attendant goes on putting the dose referred to with a spoon, into the mouth of each, meanwhile another nursing attendant follows, distributing water.

The clerk of the asylum, the sole sound employee, accompanies the prescription to make certain that the remedy has been swallowed, with a view to register the dose effectively taken by each patient.

Owing to the simplicity of the method, 350 patients are being treated in half an hour. Improved cases reach 80% in two years, as already mentioned and vary according to the intensity of reactions shown by the patients.

Dr. Travers says: "A moderate reaction is, in almost every case, followed by an improvement, whereas a violent reaction sometimes causes severe suffering which compel to temporarily give up the treatment".

The highest grade of profitableness is to be seen after 2 years remaining under regular treatment.

In 1925, the cost of this treatment 'per capita' amounted to 2 pence monthly.

The chaulmoogra seeds were being purchased for 7 pence a kilogram, from the Siam Industries Limited, Bangkok (Siam).

Replacing the seeds of *H. anthelmintica* by those of *H. wightiana* did not prove to be tolerated; the patients complained of gastric irritation together with nausea. These symptoms were bettered with the use of sodium bicarbonate. This treatment offers the advantage to be extensible to men, women and children, which cannot be done with injections. The chief physical improvement shown by patients is noticeable by an increase of strength and weight.

Travers (2) had personally undertaken the treatment of a group of 31 patients, showing large leprotic ulcers, with injections of tartar emetic, 10% in distillate water, intravenously.

He used a fresh boilt and filtrate solute, beginning with a dose of 5 c.c. (0.50 grs.), the subsequents being 10 c.c. twice a week. The injections affected by Dr. Travers himself, did neither cause any violent reaction nor determine any alarming symptom. Out of 36 lepers with ulcers, 13 were completely cured, 8 improved, 10 remaining unaltered.

Travers concluded that tartar emetic, has only a cicatrizing effect, of no influence however on the nodules, consequently of no curative value for the disease. The author does not give any statement about the total quantity ministered to each cured patient, without undesirable reactions.

To another series of 6 lepers, previously selected, he injected eight weekly doses of 0.45 grm. neosalvarsan, without the least improvement of the illness. Discussing then the advantages of the anti-leprotic treatment, Travers concludes: "I am convinced that, when we are in a position to treat leprosy from an early stage, we shall be able definitely to cure the disease".

In the work about "Segregation of Lepers" which Travers presented to the 5th Congress of Tropical Medicine at Singapore in 1923, many interesting data about the situation of lepers in the Far East are to be gathered, as well as his own ideas about a scheme of prophylaxis a resumé of which follows hereafter.

1) Elect a ground fit for agricultural purposes, of 100 acres, far at least 5 miles from any city, 2 from any village, the same to be fenced, in order to avoid free entrance of foreign people.

2) Effect a single big building of concrete, to be used as a hospital for very advanced cases or invalids, with separate rooms for treatment, kitchen, administration and warehouse; one or two lodgings for isolation and treatment of higher class patients; a house for watch-people.

3) At the beginning, lepers should be accommodated into provisory cheap buildings, the administration supplying them with the necessary material to enable them to build their homes at their best convenience. Thus, in the Leprosarium would be replanted the system of country life they are accustomed to. This plan is identical to the one suggested in 1920 by Prof. Ad. Lindenberg, for certain regions of Brazil.

4) Use the proper lepers for all charges in the institution, including that of nursing attendant, subject to small salaries, thus avoiding to admit sound employees who might run the risk of contracting the disease. The unique sound man in charge would be the chief nursing attendant, who could at the same time befit the charge of clerk.

Travers believes that 80% of the lepers are fit for some work, and considers agriculture as the best suitable form of activity for them.

5) The patients would work in agriculture 4 hours a day, in groups and by turns, under supervision of a competent person. Their output would be bought by the administrations and the proceeds be added to the regular rations of all the in-patients.

6) Around each lodging there would be a sufficient piece of ground to cultivate flowers and fruit trees.

7) The lepers would be allowed to organize their regular trade, opening shops for sale of utilities, comfort and sport articles.

8) The lepers would receive a contribution to the creation of a club with play and music, and reading rooms, with a small library and newspapers in various languages.

9) The creation of religious temples, would be allowed, and Christian propaganda offered facilities

10) Dr. Travers considers that an establishment of that kind should be visited daily by a European Doctor (native doctors do not enjoy the same influence) who would not only superintend every treatment as also would take interest in the private life of the lepers.

The author thinks also advisable the erection of a lodging place for visitors, relative or friends of the patients, which visitors should obey to special regulations.

In order to prove the possible realization, Travers mentions the Lao Simomo Leprosarium on Sumatra, which he deems a model of agricultural colony and, to conclude, he insists upon sanitary propaganda and education of the public as the most efficient means of prophylaxis against leprosy. For this purpose, a leaflet in three languages, with the heading "Leprosy-Kusha, Penyakit Besar" was published in October 1925 and widely spread out. Between practicians of the medical class, Travers' work "Leprosy, the results of the Tai Foong Chee Treatment" (January 1925) was largely made known.

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8. MALACCA STRAITS SETTLEMENTS

Dr. A. L. Hoops, P.C.M.O. (1) of the Straits Settlements, provided me with full data about frequency and prophylaxis of Leprosy. The Leper Collecting Station of Singapore existed already before 1900, as stated by Dom Sauton (2), with some twenty in-patients who were intended to be transferred to Pulau Jerejak Colony.

By the time of Sauton's visit, there were also Mission Asylums in Perak, Johore, Selangor and Georgetown. During my journey, passing through Singapore, the "New Female Leper Camp at Trafalgar Estate" was just being erected, with capacity for 50 women. The "Male Collecting Camp" capacity was for 40 in-patients. On 31st December, 1923, there were 47; 96 were admitted in 1924, of whom 77 were transferred to Penang, 6 escaped and 12 died, thus remaining 48.

Dr. E. D. Lindow passed the management of the Singapore Asylums to Dr. Eric Delafield. Dr. Hoops informed me that he together with Dr. Dowden and Dr. Taylor, respectively Medical Officers of Singapore, Kuala Lumpur and Penang, are devoting themselves to extinguishing the scourge of leprosy in those territories.

They practise a very severe quarantine over immigrants, "coolies" from Southern India as a rule. Any discovered lepers are readily isolated or sent back to their former living place. By that time, the three Sanitary Departments disposed of 1,484 beds for lepers and were endeavoring to increase that number.

From 1920 to 1924 the Straits Government increased from 630 to 924 (43%) the number of segregated lepers. Dr. Taylor estimates in 1,200 the total amount of lepers for the Establishments in the Straits and Dr. Dowden reckons to be 1,600 the total of those in the Federated Malay States.

Penang is the main centre for male-seclusion. Male-patients are sent to the Isle of Jerejak, women to Jelutong, a suburb of Georgetown, whose asylum, called "Female Camp in Penang", sheltered 40 female in-patients.

Dr. Taylor states as "Colonial lepers" immigrant patients of any origin. He believes in a direct contagiousness of leprosy; he is of opinion that placing incipient cases under treatment in dispensary, may facilitate prophylaxis; he only admits paroling when the patient is liable to be treated at home; he states that 80% of lepers react positively with Wassermann test, according to his own experience.

He says further that Chinese immigrants do not appear anxious to be discharged from the Colony, because in China, they never find assistance, nor receive identical treatment as they are here submitted to.

The administration does not allow marriage between lepers, and people who are already married have to quit from each other, each sex being to be isolated in a different leprosarium.

Male Leprosarium at the Isle of Jerejak

(Pulau Jerejak Leper Colony)

On the 20th of January, 1926, I visited in the company of Dr. W. A. Taylor, Chief Medical Officer of Penang, the Leper Colony in Jerejak. From the city of Georgetown to Jerejak, it is an hour trip in a steam-sloop. The leprosarium, which was created by the Government in 1874, comprises a very large spot of the Isle of Jerejak, all covered with vegetation.

We were received at the harbour by the resident physician, Dr. A. H. Wheatley, the Police Hindoos and a band of musicians, mostly consisting of Eurasians (mestizos from Europeans and Asiatics: half blood).

Staff: 1 resident physician; 9 nursing attendants, sound; 4 Hindoo policemen; several employees (coolies) and 119 leprous men in charge. These latter earn a monthly gratification which varies between 2 and 5 S.S. dollars, according to the kind of work they are in charge of.

In-Patients. There were 700 of them, all male. Out of those, 591 were Chinese, 94 Hindoos, 4 Malays, 1 Japanese, and 10 Eurasians, one of which English-Chinese, 1 Filipino and 8 offsprings from Portuguese and Malay. This sympathetic group forms the music band. With two of them, Velasco and Dias, I could speak in Portuguese. The Chinese, notwithstanding being the most advanced cases, would show the happiest of all, and in the course of his 8 years service in the Colony, Dr. Wheatley says he never was claimed by them for wives. They spend their time washing linen, cooking, preparing rice-wine or smoking opium. Among those living in dormitories, each group of 2 or 3 have their own burner, close to their beds. The hospitalized lepers receive food prepared in the general kitchen.

Fresh victuals are sent three times a week from Georgetown, the principal of which are: rice, vegetables, fish, beef, mutton and pork, poultry and eggs. Owing to religious feelings, lots of them prefer to live on rice and green vegetable. The daily cost per capita is 0.75 S.S. dollar, including every expense, also the tissue they receive twice a year to make out their garments.

Lepers have to care for kitchen-gardens, rear poultry: hens and ducks, and swine. Any excess of their output is acquired by the administration. All valid lepers wash their own linen. In their beds (planks over iron pieces) they have only mats and woollen blankets.

Buildings: Beside the residing houses of the managing Doctor and sound personnel, there exist 24 pavilions, of which 2 compose the hospital for helpless cases and small by-places. In one of the pavilions, with 8 individual rooms, live the Eurasians (Portuguese). All the buildings have concreted floors, brick walls and tile roofs. The capacity of this old part was 784 patients. In the farthest eastern part of the isle, they were erecting a new section, for higher class patients, this part comprising 54 houses of the kind "chalet" each one to shelter 4 in-patients. There exist two churches, one Roman Catholic, the other belonging to the Reformed Church. Protestant in-patients are in greater number, their interest making them thus entitled to frequent presents received from North America.

Water: There were two good reservoirs collecting good water from springs in the mountain in the centre of the Isle. There also exist various wells on the spot.

Cleaning and Sewerage: There was no sewer. They still adopt the night soil system. Excretions are buried in the neighborhood of the sea. The closets and bathing-tubs are well built and kept in better condition. The night-soil system is still in use even in important Asiatic cities as Calcutta and Singapore.

The Isle of Jerejak was an important focus of malaria: it is quite wholesome now. Three coolies attend to mosquitoes foci twice a week. Flies also are rather hardly seen. A sanitary Inspector from Penang visits the establishment twice a month. For this reason, sanitary conditions in the leprosarium are first class.

On my way back from the leprosarium, I visited, in the same Isle, a "Quarantine Station" (immigrants infirmary) with place for about 4,500 people.

I saw about 2,000 Tamils (coolies from South India) and Chinese, subject to quarantine for having travelled on board a steamer with cholera cases.

Movement: This old leprosarium sheltered 280 lepers in 1900 (Sauton) (2) and 495 in 1906 (Jeanselme) (3).

Data from other information show out the following movement:

Years	Admitted	Remained
1891 – 1901	150	253
1902 – 1906	152	311
1907 – 1911	177	390
1912 – 1916	174	413
1917 – 1920	152	422

Movement during these last years.

1921	Existed	438	Total	Died
	Admitted	*217*	655	201
1922	Remained	450		
	Admitted	*249*	699	186
1923	Remained	498		
	Entered	*190*	688	140
1924	Remained	539		
	Entered	*187*	726	130
1925	Remained	584		
	Entered	*247*	831	117
1926	January 20 existing		700.	

The duration of the illness, for the segregated lepers in the last 3 years was:

Time	1922	1923	1924
1 year	4	5	9
2 years	8	5	10
3 years	71	53	48
4 years	65	34	31
5 years	39	38	40
6 years	15	32	29
7 years	20	5	5
8 years	12	5	6
9 years	1	3	7
10 years	14	10	2
Total of admitted	249	190	187

Treatment: Wheatley (4) who was known to me as Superintendent physician of the leprosarium in Pulau Jerejak, communicated to the 5th Congress of Tropical Medicine, which took place in Singapore in 1923, that the Chinese lepers segregated there, used pills of seeds of the *T. kurzii* which they name "Tai-foong-chee" with which they mix up another drug "Chit-les" supposed to be a gastric sedative, and have shown improved.

By that time, the principal treatments adopted in the leprosarium were the following:

1) Sodium Hydnocarpate at 3%, intravenously, at the dose of ½ c.c. to 4 c.c., twice a week.

2) Mixture of 2 parts of solute of Sodium Soyate at 3%, with one part of Sodium hydnocarpate, intravenously and orally.

3) The E.C.C.O. of Muir, ministered intramuscularly.

Till then, only three cases had been considered as cured in the colony.

After five years of intensive treatment, with Hydnocarpate oil, and Sodium morrhuate and Soyate, the results up to the end of the year 1925 were as follows:

Cured 8; improved 129 (or 17%). The cured cases were not given parole because this is not authorized by the regulations. Thanks to the modern treatment, mortality show a considerable decrease.

TABLE N. 43

Results of the modern treatment in all the Leprosaria of the Straits Settlements.

Total	1920	1921	1922	1923	1924	1925
Interned	655	747	837	729	924	—
Under treatment	152	220	495	448	643	—
Negatives	—	—	4	—	4	—
Greatly improved	—	47	5	—	70	11 %
Improved	—	81	33	190	159	25 %
Stationary	—	30	35	231	187	—
Worse	—	—	—	9	11	—
Died	113	203	207	150	149	16 %
Released	—	—	4	—	—	—
Lesions disappeared	3	—	—	3	—	—

LEGISLATION

The decree No. 63 under the heading "Lepers" was dated 19th of May, 1899 and has been reviewed in 1920 and 1921 and amended in 1924 (5).

The prophylaxis of leprosy in the Straits Settlements is based on this decree, which is resumed here below :

a) Authorizes the Governor to establish asylums for receiving and secluding lepers, as also premises in view of segregating them for treatment.

b) Forbids lepers to practise certain professions (baker, butcher, cook, launder, tailor, barber, servant, nurse, street porter, etc.) and to frequent certain public places, subject to a fine up to 50 dollars or to imprisonment.

c) Compels every leper to isolate himself.

d) Determines that medical authorities may enter any living place or property where lepers are suspected to exist and to seclude them.

e) Enjoins arresting wandering lepers.

f) Orders to isolate any lepers who have turned themselves a heavy burden to persons responsible for their maintenance.

g) The persons responsible for their entertainment are obliged to indemnify the Government.

h) An order in writing from the Colonial Secretary has sufficient force to justify arresting and isolating any leper.

i) The Governor may order any leper to be set at liberty or given parole as cured.

j) Forbids the entrance of the colony to alien lepers.

k) Refers to discipline and shows a model of the requirement to be signed by the leper, soliciting admission.

l) To article 18th, of the decree No. 63, were added amendations which establish the following alterations:

1) Authorizes the home seclusion of lepers, under certain restrictions.

2) Determines that the Health Officer of each district is to organize and maintain a record of houses containing lepers.

3) The permission of home seclusion shall become void if the house keeper admits as a guest any person whenever not a relative, or if somebody would cohabit within any room occupied by the leper.

4) No house having sheltered a leper can be let for rent again, without previous written permission of the sanitary authority.

5) No leper segregated at home may go out without a permission of the sanitary administration and shall deposit a caution of 250 dollars as a guarantee that he will not infringe the existing regulation.

6) Orders disinfection of washing and implements belonging to lepers as well as terminal disinfection of their buildings.

m) The articles 18, 19, 20 and 21 (the last) stipulate some administrative rules to be provided for, of a lesser importance.

From the rigorous care afforded in the fight against leprosy in this region, we are entitled to forecast better results than in any of the other British Colonies in Asia.

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REHABILITATION OF LEPROSY SUFFERERS

10 Million Cases of Leprosy in the World Today

(The following has been received from the Regional Office of WHO for South East Asia, New Delhi)

Early detection and treatment of leprosy may prevent the deformities which brand the leprosy patient for life and make it difficult for him to be accepted in society as a normal member of the community even after he has been cured. This opinion was expressed at the Scientific Meeting on Rehabilitation in Leprosy recently held at Vellore, India.

Sponsored by the World Health Organization, the Leonard Wood Memorial (American Leprosy Foundation) and the International Society for the Rehabilitation of the Disabled, the meeting was attended by leading scientists and plastic and orthopaedic surgeons from a number of countries including India, Japan, Mexico, Philippines, U.K., and U.S.A.

Dr. James A. Doull, Medical Director of the Leonard Wood Memorial, Washington, U.S.A., was elected Chairman of the meeting.

10 MILLION SUFFERERS

A report adopted by the meeting said that there are probably 10 million cases of leprosy in the world today. Of these, fewer than 5% could be accommodated in existing institutions. The vast majority were living in their own homes and probably not more than 20% were receiving treatment of any kind. It had been estimated by WHO that 25% of all leprosy patients suffer from some degree of physical disability.

As a means of accelerating progress in rehabilitation the meeting strongly urged that leprosy be studied and treated along with other diseases in centres where a wide range of medical scientists was available. Leprosy research should no longer be carried out only in institutions confined to leprosy and by leprosy specialists who do not have the assistance of basic scientists and experts in other fields. In addition to strengthening leprosy research this would have a great psychological advantage. *It was felt that as long as the medical profession continued to treat leprosy separately from all other diseases, the public could hardly be expected to believe that it was not "a disease apart".*

PEOPLE MUST BE TOLD . . .

The meeting stressed the need for large-scale educational and propaganda campaigns to inform the public about the facts of the disease. It was felt that widespread and deep-rooted prejudices with regard to leprosy formed the greatest single barrier to rehabilitation. *The public should be educated to appreciate the fact that leprosy is curable and that the deformities which remain after cure do not necessarily mean that the disease is still active.*

Rehabilitation agencies in various fields were urged to include leprosy patients in their programmes. It was felt that the experience of these agencies in combating prejudice concerning physical disability and in mobilizing professional and public understanding could be a great asset in developing future leprosy programmes.

Equal stress was laid on the education of the patient himself. He should know what precautions to take and what routines to follow to avoid getting deformities. *Rehabilitation should begin when the disease was first diagnosed.*

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UNIVERSITY OF MALAYA IN SINGAPORE
(Faculties of Arts, Law & Science)

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September, 1960

This month the first two items in our Periodicals section are of some local interests.

LN6 (AP8) *Eastern horizon* is a new monthly review published in Hong Kong and the first two numbers received make exceptionally pleasant reading. It does well to describe itself as a "popular cultural magazine" for despite Joseph Needham's thoughtful "Dialogue of Europe and Asia" in the first number, the general tone is light. The editor's aim is "to present Asia in the widest possible way and so contribute to a better appreciation of Asian life and culture . . . East and West should, and can, meet on one new level". The level appears to be weighed in favour of the social sciences and humanities with some emphasis on art and literature. Writers in the first two numbers, apart from Joseph Needham, include Edmund Blunden, Mulk Raj Anand and Malaya's Ee Tiang Hong of Malacca. A pleasing feature of the journal is the photographic section which shows a considerable improvement in the second number. Book reviews are another feature of the review.

LN7 (AS8) *World list of future international meetings*, published by the Library of Congress, promises to be most useful to readers here. Staff members planning study leave, new graduates seeking overseas experience, expatriates on home leave, will all find this monthly publication valuable. Each issue covers a succeeding 3-year period so that the August number to hand takes us to July 1963. Each issue is in 2 parts, the first covering "science, technology, agriculture and medicine" and the second, "social, cultural, commercial and humanistic" meetings. The value of each number is increased by a subject and sponsor index.

J.M.W.

THE MEDICAL JOURNAL OF
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UNIVERSITY OF MALAYA IN SINGAPORE
(Faculties of Arts, Law & Science)

LIBRARY

October, 1960

with

MEDICAL LIBRARY SUPPLEMENT

LIBRARY NOTES

October, 1960

THE LIBRARY AND ITS MICROTEXTS

As this month's list includes the first entries in an important legal microcard series it is an appropriate time to write something on the holdings of this library in microform or microtext, i.e. books produced on photographic film or paper at high reduction ratios.

Microfilm materials fall into two main types: micro-transparencies and micro-opaques. Of the first type, the microfilm or 35 mm. strip film, has been familiar to readers for many years. It is most suitable for reproducing long runs of periodicals, newspapers, etc., and is convenient for anything best referred to by date or serially as produced. This Library's most notable holdings in this field include *The London Times* from 1785 to date as well as valuable mss. material on Asian history from the India Office Library, including the Straits Settlements Factory records and the Java Factory records.

The second type of transparency is the microfiche, a 3″ x 5″ sheet film with full-size heading indicating title and content of the microfiche. It will take approximately 50 pages to a sheet and can be stored like a catalogue card. As it is self-indexing it is invaluable for quick reference. This Library does not possess a machine adapted to reading microfiche but it is hoped to purchase one in 1961. Microfiches can be reproduced by a library photographic unit. Nanyang University has one already and a new cheap microfiche camera will soon be on the market here enabling this Library to produce its own microfiches.

Micro-opaques fall into two main types: the micro-card (3″ x 5″) and the microprint (9″ x 6″). The former is identical with the microfiche but is opaque and some of the newer samples are two sided enabling 100 pages to be reproduced on one card. It is more durable than microfiche and in the same way, through a legible heading, is self-indexing. It cannot be produced locally and must be ordered from a publishing firm just as one would order a book. This library has some important sets on microcard including the American journal of physiology, the Annalen der Physik and T. J. Dibdin's London theatre.

The microprint (9" x 6") differs only in size from the microcard and it can take 100 pages on one side. The only set this Library has is the British Sessional Papers of the 19th century and this comprises 6,000 volumes.

No one can deny that microform material is more trouble to read than normal text but its increasing use is due to the need for preservation (especially where fragile paper is concerned), for the saving of storage space (as much as 95% of space can be saved) and above all, to the non-availability of material in any other form. Large sets bought in microform are normally cheaper than books.

This Library has (in complete volumes, excluding periodical articles, etc.) the following holdings: — Microfilms: 1,600 volumes.
Microcards: 3,000 ,,
Microprints: 6,000 ,,

LN8 (Microcard) *Law reports for England and Wales* (mainly pre-1865). The volumes listed in our Law section this month are the first to come in of an important set which eventually will comprise nearly 350 volumes of important reports which were not included in the great reprint of the English Reports. They are being reproduced in microform by Oceana Publications and many have been out of print for years. Most of them represent valuable English Common Law sources.

A Local Achievement

It is not the place of these notes to give reviews in fields that are adequately covered by the recognized reviewing journals yet occasionally a title on the booklist can be overlooked and in this particular case very few reviews have reached Singapore to date.

LN9 (HN770) "*Upper Nankin Street, Singapore*" *by Barrington Kaye*, formerly of the Social Research Unit here, will certainly add lustre to our University of Malaya Press. This sociological study of Chinese households living in a densely populated area will probably make its primary appeal to the trained sociologist and welfare worker in this part of the world.

Apart from the local interest, however, the selection of the research area, the phasing of the survey and its interview incentives are all important as a study in social survey methodology.

Yet it is hoped that not only the sociologist will study this book. Anyone who lives in densely populated areas in S.E. Asia will find the study an absorbing one and will want to thank Mr. Kaye and the Dept. of Social Welfare which co-operated so well with him.

J.M.W.

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NEWSLETTER FROM THE UNITED STATES

From: Science Information Bureau
International Section
34 East 51 Street
New York 22, New York 15/10/60

Dear Colleague:

Progress, although slow, is constantly being made in determining the influence of heredity versus environment on development of disease. A further step forward in this area has been made by the use of *an electrocardiograph to detect congenital heart ailments in unborn babies.* According to S. D. Larks and L. Longo, reporting in the July 16 issue of The Journal of the American Medical Association (*173:* 1217, 1960), improvements in electrocardiographs as well as in technique and in understanding of the problems has made it possible to take an extremely accurate electrocardiogram of a foetus as early as the 22nd week of pregnancy. There are many advantages to early detection of heart ailments. First of all, preparations for surgery of the newborn immediately after birth can be planned, possibly saving many lives. As far as research is concerned, this new technique may permit physicians to determine exactly when in the course of a pregnancy certain congenital abnormalities do occur, thus affording an answer to whether the abnormality is the result of heredity or of some infective condition contracted during pregnancy.

A review of current therapeutic agents available for management of some of the common intestinal parasitic diseases was undertaken by B. H. Kean, who reports his findings in the July issue of Postgraduate Medicine (*28:* 35, 1960). This study was conducted because of the number of recently discovered drugs available for eliminating or controlling these infections. The author estimates that about 40 million citizens of the United States are now harboring parasites. This fact combined with increased international travel, plus the influx of about one million Puerto Ricans into the United States, and the emphasis here on global medicine will probably make physicians more alert to the possibility of parasitic infections when they make their diagnoses. One of the common intestinal parasites is *Enterobius vermicularis,* also called pinworm or threadworm. Re-infection makes this parasitic disease difficult to cure and often is responsible for its protracted course. *A new therapeutic agent, pyrvinium pamoate (Vanquin) is available for treatment of enterobiasis* in conjunction with the usual adjuvant measures. Dr. Kean states that a single dose of Vanquin will cure enterobiasis in over 90 per cent of patients. The recommended dose is 5 mg. of the anhydrous pyrvinium base per kilogram of body weight; or 1 teaspoonful (5 cc.) of Vanquin suspension per 22 lbs. (10 kg.) of body weight; or one 100 mg. tablet per 40 lbs. of body weight. Because overdosage is not dangerous, dosages may be rounded off toward the larger size. Toxic symptoms rarely occur.

Incidence of gout among women is more common than was formerly believed, according to a recent study of 74 patients with gouty arthritis observed during the past four years. The study was undertaken by R. E. Turner and co-workers writing in the September issue of A.M.A. Archives of Internal Medicine (*106:* 400, 1960). In most studies of patients with gout women made up less than 10 per cent of the total number of cases, but in this study, 19 of the 74 patients with gout were women. Most physicians have observed that when gout occurs in women, it usually happens after the menopause. In this study, 4 of the 19 women contracted gout before their menopause.

A faster than average hardening of the aorta is associated with increased incidence of heart attacks. This observation was based on an autopsy study of 285 men and was reported by S. L. Wilens and C. M. Plair in the August issue of the A.M.A. Archives of Pathology (*70:* 149, 1960). In the average man (about one out of two) arteriosclerosis progresses to approximately the same extent throughout life. In some exceptional persons (about one in eight) the arteriosclerotic process is retarded, and in about the same number of persons, the process is accelerated. The authors found that the incidence of myocardial infarction was 5½ times as great in persons with aortic sclerosis that had progressed 15 or more years beyond the average for their age when compared with men whose aortic sclerosis was retarded 15 or more years behind the average for their age.

Some authorities have felt that twins are more likely to develop psychiatric illnesses requiring hospitalization than are non-twins. This had been attributed to a condition known as "confusion of ego identity" which was believed to occur more commonly in twins who look alike, are dressed alike, and are treated alike. However, a recent study by D. Rosenthal, based on studies in Sweden and Germany and published in the September issue of the A.M.A. Archives of General Psychiatry (*3:* 297, 1960), indicates that this theory is not necessarily true. The best evidence available points to the fact that *neither schizophrenia nor psychiatric illnesses requiring hospitalization occur more frequently in twins.* It is a logical conclusion, therefore, that "confusion of ego identity" does not have value as far as etiology of schizophrenia is concerned. It is possible, however, that "confusion of ego identity" is a symptom rather than a cause of mental disorder.

More news next month. Good health, good luck, and good practice.

THERAPEUTICS.

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THE NUTRITION SOCIETY

Symposium on Ribonudeic Acids and Polyphosphates

The Central National de la Recherche Scientifique has arranged a Symposium on "The Structure, Synthesis and Function of Ribonudeic Acids and Polyphosphates" to take place in Strasburg on 6 – 13 July, 1961. Details from Dr. D. Delaroche, C.N.R.S., 13 Quai Anatole France, Paris 7, France.

Third World Congress of Psychiatry

This Congress will be held on 4 – 10 June, 1961 at McGill University, Montreal, Canada. Details from The General Secretary, III World Congress of Psychiatry, 1025 Pine Avenue West, Montreal, P.Q., Canada.

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Obituary

Dr. HAJI SIR KAMIL MOHAMED ARIFF

Kt.B., C.B.E., M.C.H., J.P., L.M.S.

THE eleventh day of August, 1960 was an extremely sad day for me. Together with another old friend and colleague, Dr. N. K. Menon, we had the very unpleasant duty of watching another very old friend and colleague, Haji Sir Kamil Mohamed Ariff, breathe his last. It was a sudden and unexpected end, albeit very peaceful as Kamil himself might have wished. To me he was "Shorty". He was only short in stature but he was a veritable giant as all those who came into contact with him knew. He was a founder member, Hon. Secretary and Ex-President of the Penang Medical Practitioners' Society. He was extremely popular with all his colleagues and no meeting or dinner was complete without his jovial and genial presence. He had a very broad sense of humour and plenty of patience and was always ready to see the other fellow's point of view. The best tribute I can pay my old friend is for me to say that with his passing away, the Medical Practitioners' Society and the Public have suffered an irreparable loss. He was a born leader of men and commanded the respect and love of all those who had the good fortune to be his friends.

The late Sir Kamil was born on 9th July, 1893. He was educated at the St. Xavier's Institution, Penang and graduated from King Edward VII College of Medicine in 1917. He was in private practice from 1918 till the day of his death.

He was very active in public affairs and in his life-time he held the following main appointments and others too numerous to mention:

Federal Legislative Councillor, Settlement Councillor, Municipal Commissioner, Chairman of the Muslim Advisory Board, Chairman of the Muslim Orphanage, Founder Member and Ex-President of the Rotary Club, Penang and Founder Member and Ex-President of the Penang Medical Practitioners' Society. He was created a Commander of the Order of the British Empire in 1951 and was knighted by Her Majesty Queen Elizabeth II in 1956.

DR. YEOH CHEANG HOE.