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Editorial

Severe shock, in some cases resulting in the death of the patient, due to the administration of penicillin is a rare phenomenon. In England and Wales there were eight deaths due to penicillin sensitivity in two years.[1] These deaths are nevertheless tragic and are becoming more common. The nature of penicillin shock is imperfectly understood. Reactions to penicillin can be divided into two types — the immediate and the delayed. The immediate reactions are the dangerous ones and account for nearly all the deaths due to penicillin. Typically the symptoms begin within fifteen minutes of the dose of penicillin being given. Penicillin shock is characterised by extreme dyspnoea, urticaria, cyanosis and circulatory collapse. It exhibits a close resemblance to anaphylactic shock and to the severe or fatal reactions which may occur following the administration of many other drugs.

Aetiological similarity between anaphylaxis and immediate drug reactions has been accepted even though the majority of drug reactions cannot be shown to involve an antibody — antigen response. Nearly always the patient who is hypersensitive to penicillin has had penicillin previously. In accounts of thirty-two severe or fatal reactions we have found that thirty cases had given a past history of receiving penicillin — in all these thirty-two cases the patient had been asked specifically whether or not he had had penicillin before. Of thirty-one cases seven gave a history of allergy. This proportion is larger than that in the general population. Kern and Wimberley[2] estimate that one in seven of the general population is an allergic subject. They believe that penicillin hypersensitivity is acquired and that an allergic subject is more likely to acquire it than a normal one. They also point out that during the first nine years in which penicillin was used there were two deaths due to it in the next eighteen months there were fifteen. It may be that with widespread use of penicillin all allergic subjects will become hypersensitive to penicillin.

Penicillin shock thus shows clinical similarity to anaphylaxis, most of the cases have had a previous sensitising dose and allergic subjects are particularly liable to both types of shock. But it may be thought that only proteins can cause anaphylactic shock. There is evidence that certain drugs induce hypersensitivity by uniting with protein molecules in the patient's body. Aspirin and sulphonamides will not produce a local reaction in the skin of sensitised patients unless the drug is first mixed with the patient's or normal serum.[3] In 1931, Oriel showed that an aspirin-proteose complex, isolated from the urine of a patient sensitive to aspirin, would produce a cutaneous reaction not produced by aspirin alone.[4] Aspirin, sulphonamides and quinine give no dermal response but will do so if applied to the mucosa of the mouth for twenty to thirty minutes. So far no one has shown that penicillin will unite with body protein in this way. There is, however, evidence that penicillin sensitive patients have antibodies to penicillin in their blood,[5, 6, 7, 8, 9].

If severe penicillin reactions are of the nature of anaphylactic shock, then something of practical importance, relevant to this discussion, may be learned from the experiences of doctors using sera and the anaphylactic reactions resulting from sera. Laurent and Parish advise that a doctor should differentiate between testing for local serum sensitivity by intradermal or conjunctival tests and for general sensitivity by subcutaneous or intramuscular test doses. They believe that whereas serum rashes occur in about 5% of patients, deaths occur in only one in fifty thousand to two hundred thousand.[10] Here is seen again the differentiation between the delayed non-fatal reactions which are common and the immediate severe ones which are rare. The skin test is not a reliable way of detecting those patients who may suffer severe shock. Harries and Mitman point out that there is no exact parallelism between dermal and general constitutional hypersensitivity.[11] Joe considers these tests to be uncertain guides and doubts whether their routine use has any practical advantage.[12] Ratner, admitting their defects, considers them worth doing.[13] Banks believes that a small injection subcutaneously is a better test for general sensitivity than a dermal or conjunctival test.[14] Parish recognises the unreliability of intradermal and conjunctival tests. He advises that the safest course is to give a small dose of diluted serum by the same route as that chosen for the main dose. You should then wait thirty minutes and if no reaction has occurred give the main dose slowly.[15] Later we will quote evidence casting similar doubts on the reliability of skin and eye tests for general penicillin sensitivity.

It has been suggested from time to time that procaine in procaine penicillin or given with penicillin may be the cause of some of the reactions. A patient may be sensitive to both drugs. Morgan reports a case who gave a history of being sensitive to procaine. The patient was given penicillin alone and developed a severe reaction with recovery.[16] Lewis points out that five hundred thousand units of procaine penicillin contains two hundred mgm. of procaine. If this amount were injected by accident into a vein it could produce the symptoms of procaine poisoning. These are central stimulation and convulsions.[17] We feel that these differ from those of penicillin shock. Lewis does not doubt that most reactions after penicillin are truly due to the penicillin. Handford and Richiutti, using procaine penicilliin in oil (procaine 120 mgm./cc.) intravenously in laboratory animals to four times the ordinary human dose produced no ill effects. When the dose was increased above this level, symptoms developed due to oil embolism.[18] It would seem that procaine is rarely the cause of these reactions so far as its poisonous properties are concerned. Of course procaine can itself produce shock in individuals sensitive to it and this shock would be indistinguishable from penicillin shock.

If we accept penicillin shock as being fundamentally due to the same causes as anaphylactic shock, not as a proven fact but as a satisfactory hypothesis on which we can base our future actions when faced with this grave danger to one of our patients, then some knowledge of anaphylaxis should be of assistance to us.

In animals the sensitising dose may be very small and may be given by any route. Several days or weeks must elapse before the anaphylactic state is established. To produce shock the dose given must be large and must be given into a vein. This is necessary in experimental work, since the experiments demand that the shock will be induced with certainty. It may be that a small number of the animals would go into shock if the second dose were given by a route other than intravenously. Since in man only one patient out of every fifty to two hundred thousand develops shock when the second dose is given, it would obviously be difficult to prove in the laboratory animals that shock is never produced by non-intravenous administration. We must not infer that penicillin shock is due to accidental intravenous injection.

The antigen used for the second dose must be a protein or a protein united to a simpler chemical substance. The whole antigen, or the simpler chemical substance (in our hypothesis this is penicillin) must be identical to or closely similar to the sensitising agent. The main symptoms of anaphylactic shock come on within a few minutes. They are caused by contraction of smooth muscle and damage to capillary endothelium. They vary in different animals — in the guinea pig the stress falls on the smooth muscle of the bronchioles — in the dog on the smooth muscle of the hepatic veins — in the rabbit on the smooth muscle of the pulmonary arteries.

The substance which is mainly responsible for these effects is histamine. Other substances in addition to histamine play an important part in producing anaphylactic shock. Since we have no way at present of reversing the effect of these other substances, we cannot expect antihistamines alone to reverse the rapid deterioration in the condition of our patients suffering from penicillin shock. Antihistamines, given to laboratory animals in induced anaphylactic shock, produced a significant decrease in the severity of the symptoms and the mortality. They did not suppress the shock altogether. It has been shown that the degree of shock in animals is proportional to the amount of histamine in the blood and lymph and that recovery coincides with its disappearance.

Whatever may be the cause of penicillin shock and however interesting it may be to revise our knowledge of it, we all want to know what is the best attitude to adopt towards this menace. Firstly we should not abandon the use of penicillin. Penicillin is still one of the most valuable and safe of the antibiotics. Severe reactions are rare and deaths rarer still. The amount of penicillin used in the world to-day is measured in hundreds of tons annually. In 1956, patients in the United States swallowed forty tons of penicillin and probably three times as much as that was administered to them by injection.[19] In a survey of 95 hospitals with 51,000 beds, Welch *et al.* found 59 cases with 19 deaths.[20] There are obvious indications for the use of penicillin, the drug saves many lives and if its use were abandoned it is almost certain that more lives would be lost from disease than would be saved by preventing penicillin shock. Doctors should also know that it is possible to be held to be negligent if penicillin is not given when its administration is strongly

indicated. In a case in England [21] in 1955, a patient sustained a compound fracture of the radius and ulna. Penetration of the skin was very slight. The attendant doctor did not give the patient any penicillin. Gas gangrene developed and the arm had to be amputated. The doctor said that he did not give any penicillin because the skin penetration was slight and because he had had several patients who had become sensitised to penicillin. Expert evidence was given that the administration of penicillin in such cases was now an established practice and its omission difficult or impossible to defend. The judge made a finding of negligence.

Dismissing the suggestion that penicillin should no longer be used, our next problem is to decide whether any test can be used to detect those patients who are likely to suffer a severe reaction if penicillin is given to them. We should ask our patients whether they have had penicillin previously. This is because we are expected to. It is better to assume that every patient has had penicillin. Even if the patient says he has never had any this may merely be because he has forgotten or he has had some without knowing that it was penicillin. We should certainly ask him about eczema, asthma and hay fever or any other allergy. Allergic patients are more liable to severe reactions than others. Above all we should ask him whether he has had a reaction to penicillin in the past. If he has had one then he is probably going to suffer another one if he is given penicillin. Every patient who survives a severe penicillin reaction must be told that another penicillin injection or tablet by mouth may kill him. Next we must ask ourselves, "Does this patient really need penicillin?" We found reports of ten cases who suffered severe reactions, with five deaths, in whom in our opinion pencillin was given unnecessarily. Many of the commonest conditions seen in practice really do not need penicillin. The common cold — the average case of acute tonsillitis — most sinus infections — eczema and dermatitis, all of these conditions have led to death from penicillin shock. A very large proportion of the deaths from penicillin, possibly 50% of them, would not occur if penicillin were to be given only when its use were clearly necessary.

The difficult question now has to be faced as to whether every patient should have a skin test for penicillin sensitivity before penicillin is administered to him. Many physicians believe that the evidence supporting the proposition that a positive skin test indicates that the patient is in the group of those liable to die from penicillin shock is so strong that the test should be done in all cases. They believe that lives can be saved by refusing to give penicillin to those with a positive skin test. Smith found twenty-five positive results to skin and conjunctival tests in thirteen hundred and sixty-five patients tested. Ten of these were known to have suffered penicillin shock with one death. [22] Williams states that penicillin skin tests will show a positive result in fifteen minutes in the vast majority of penicillin sensitive cases. [23] He agrees that a negative test will not indicate absence of sensitivity with certainty. There is strong evidence for this later statement. Idsoe, Wang and Wang, working in Taiwan, found that of twelve deaths, six had had

negative skin tests, the other six had had no tests done on them. [24] Further they found that of nineteen who survived severe penicillin shock, six had had negative skin tests, the others had had no tests done on them.

The tests used were a skin scratch through a drop of penicillin, 100,000 units/cc., an intradermal injection of 0.1 cc. of the same solution and a subcutaneous injection of 10,000 units. [24] Smith used a forearm scratch through a drop of procaine penicillin, 300,000 units/cc. [22] A positive result is a skin erythema of over 1 cm. diameter, a skin wheal and, if a drop of the procaine penicillin solution is placed in the eye, watering, redness and oedema. Williams advises much smaller doses for testing. [23] He advocates initial testing by prick or scratch methods using strengths of 5,000 to 10,000 units/cc. He also quotes authors who, even after a negative skin test, would start with very small doses of penicillin intracutaneously and work up gradually by eight steps to a full dose. We feel that such extreme caution, the whole testing process taking several hours, is impractical. The use of a single skin test is possible in most cases as a practical measure in Malayan conditions. The proportion of penicillin deaths which would be prevented in this way is unknown. We do not know whether the majority would be prevented. It would seem likely that in many patients the skin may be insensitive while at the same time internal organs may be sensitive. We are attracted by the logic and simplicity of Parish's opinion: "The safest course is to give a small dose, e.g. 0.1 or 0.5 cc. of a 1/10 dilution of serum by the same route as that chosen for the main dose. Wait thirty minutes and if no indication of sensitivity is noted, then give the main dose slowly." [15] Since the smallest dose to cause death in the literature is 5,000 units, so far as penicillin is concerned, the test dose by mouth or intravenously would have to be much smaller — say 500 units. Lastly the fact must be noted that patients having a course of penicillin injections have suffered severe reactions not at the first dose in the course but after subsequent ones. Thus of sixty-three cases in whom this observation was made, 52 suffered their reaction at their first injection, four at their second, three at their third, two at their fourth, one at his eighth and one at his ninth injection. We emphasise that each of these reactions occurred during one continuous series of injections. In order to avoid eleven of these reactions with four deaths, a reliable test for sensitivity would have to have been done before each injection, however long the course and however many the injections.

Doctors must make up their own minds as to the practice they will follow. The tests available are not reliable but they are better than nothing. We would suggest that the intramuscular injection of a small dose is likely to prove a better test for the presence of general constitutional hypersensitivity to penicillin than the skin tests are.

Penicillin shock occurs very suddenly and unexpectedly. Any doctor using penicillin may be faced with this catastrophe in his practice at any time. A few seconds to fifteen minutes after the dose of penicillin, symptoms indicative of respiratory obstruction, circulatory failure and urticaria occur. Any one of these may exceed the others in severity, all

are usually present. The shorter the period between dose and onset the higher the mortality. For example, of eighty-three cases in whom this period was less than fifteen minutes, seventeen died, whereas of thirteen cases in whom the period was more than fifteen minutes only one died. Death occurs within twenty to sixty minutes in most cases though a few have died after fourteen to sixteen hours.

Respiratory obstruction produces intense cyanosis and dyspnoea. The obstruction is caused partly by bronchospasm and partly by swelling of the throat, tongue and larynx. The pulse and blood pressure fail and rapidly become imperceptible. Extreme swelling of the face and widespread urticaria are common.

Despite the sudden onset and rapid progress of this condition treatment is available and may save life. But the doctor must be prepared beforehand. Treatment must be instituted at once. We think that the evidence favours the use of the antihistamines. As one example of many, we may refer to Humphrey's case. His patient, in severe penicillin shock was given 2 cc. of 2.5% Anthisan intravenously. Relief was noted to begin within fifteen minutes and the patient recovered.[25] Antihistamines may be given along with the injection of penicillin. Maslansky and Sanger give evidence that penicillin can be given safely, even to sensitised patients, if it is mixed with an antihistamine.[26] Lewis advises the use of adrenalin. This is given in a dose of 0.5 cc. intramuscularly and the needle left in.[17] Adrenalin, 0.1 cc. is given every minute until the attack begins to pass off. Penicillinase (Neutrapen, Burroughs Wellcome), given intramuscularly in a dose of 800,000 units has been reported to reduce the penicillin blood level to zero within one hour.[27] This drug has produced a satisfactory response in most cases within twenty-four hours and in others within two to six days. It has been used in delayed penicillin reactions but may have a place in reinforcing the effect of antihistamines and adrenalin in immediate reactions. A doctor working in his dispensary or in his patient's home may not be able to do more than use these antidotes. They should also be used in hospital. In addition the services of the anaesthetist should be called for. He should pass an endotracheal tube, give a relaxant and maintain positive pressure respiration until the patient recovers. Heyworth reports the successful treatment of a case in this way.[28] We feel that this last method should be used in every case if the necessary skill and equipment are available. The anaesthetist, more than any other member of a hospital staff, has the knowledge and experience of how to deal with respiratory failure, whatever may be the cause.

Lastly we suggest that those patients who have suffered from penicillin shock, begin to recover, but remain in coma or drowsy, should be treated as suffering from cerebral oedema due to the period of hypoxia. We suggest that these patients should be given 50% sucrose solution, sixty to ninety cc. intravenously. This solution has been used with success by us in other forms of delayed recovery from respiratory insufficiency.

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MILLI-EQUIVALENTS AND TRANSFUSION SOLUTIONS

BY

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Over the past ten years there has been a growing tendency to express the formula of intravenous solutions in terms of "Milli-equivalents" as opposed to expressing the strength in terms of a "Percentage Weight/Volume Solution". The change of terminology is largely due to the development of the flame photometer by which the quantitative analysis of Sodium and Potassium in body fluids can now be rapidly and accurately determined. The results of such analysis are expressed in Milli-equivalents. Therefore it is obviously of benefit to the physician or surgeon to express the composition of intravenous or replacement fluids in similar terms whereby the accurate chemical composition of the fluid concerned can be immediately assessed.

It will be remembered that the definition of "Equivalent Weight" is defined as the weight of an atom or radical divided by its valency. A Milli-equivalent is one thousandth part of the equivalent weight, and this amount when dissolved in one litre forms a milli-equivalent solution. Normal Saline contains 0.9% w/v of Sodium Chloride, i.e. 9,000 mgm per litre. As the molecular weight of Sodium Chloride is 58.5 (Na = 23, Ci = 35.5) therefore normal saline contains $\frac{9000 \times 23}{58.5}$ = 3,540 mgm of Na per litre balanced by (9000 — 3540), i.e. 5460 mgm Cl per litre. There is no obvious relation between these two figures. However, a clearer picture is obtained when expressed in terms of Milli-equivalents. A Milli-equivalent of Na contains 23 mgm per litre. Therefore the number of mEq/L of Na in Normal Saline is $\frac{3540}{23}$ = 154 mEq/Litre and the number of mEq/L of Cl. is expressed by $\frac{5460}{35.5}$ = 154 mEq/L Cl, which immediately clarifies the balance between the acidic and basic Ions.

The following rule can be formulated:

$$\text{mEq/L} = \frac{\text{Mgm/Litre} \times \text{Valency}}{\text{Atomic Weight}}$$

or conversely:

$$\text{Mgm} = \frac{\text{Milli-equivalents} \times \text{Molecular Weight}}{\text{Valency}}$$

The advantage of adopting the milli-equivalent system can be further illustrated by comparing the average ionic composition of blood plasma of an adult person in health when represented in the milli-equivalent and mgm per cent systems.

BASE			ACID		
mEq/L		Mgm/cent	mEq/L		Mgm/cent
Na	142	330	HCO_3'	27	3.5
K′	5	15	CL′	103	360
Ca″	5	10	HPO_4''	2	3.5
Mg	3	2.5	SO_4''	1	—
			ORG.AC	6	—
	155		PROTEIN	16	—
				155	

DIAGRAM 1

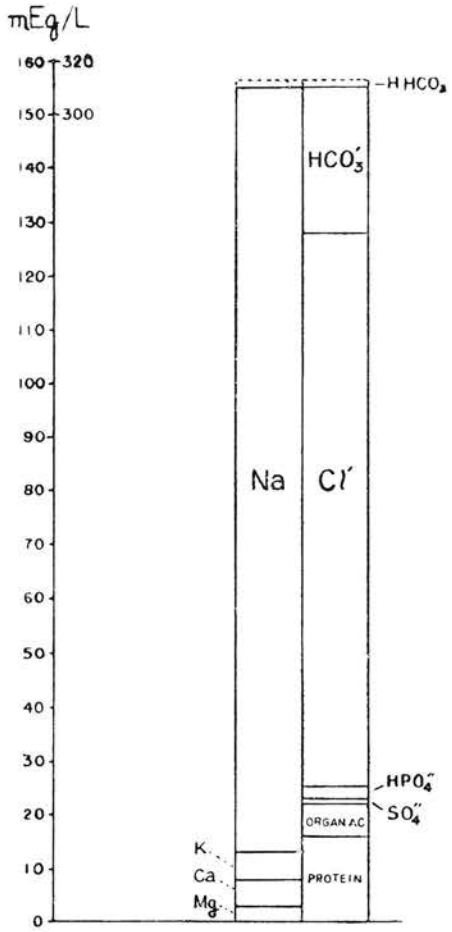
Diagram 1 is constructed by superimposing the individual values for the cations in the left hand column and those for the anions in the right hand column. From this diagram it is clearly observed that nearly all of the base (91 per cent) is Sodium and that Chloride is the largest component of the total acid value. The next largest item of structure is the concentration of the Bicarbonate ion (HCO_3) which, together with the base that it covers, constitutes the plasma bicarbonate. The value for the sum of organic anions in the plasma is taken as the difference between the sum of the other ions and the total base. The line down the centre demonstrates that in assessing the constituents of blood plasma, separately controlled quantities of individual ions have to be considered and not salts.

The Milli-equivalent strengths of some of the solutions used for the treatment of electrolyte imbalance are given in the following table:

INTRAVENOUS FLUID	IONIC CONCENTRATION IN mEq/L								
	Na^+	K^+	Ca^{++}	Mg^{++}	NH_4^+	Cl^-	HCO_3^- equiv.	PO_4^-	Lactate$^-$
Isotonic Saline (0.9%)	154					154			
Ringers Solution	147	4	6			157			
Ringers Lactate (Hartmann's)	130	4	4			111	27		22
M/6 Sodium Lactate	167						167		
Darrows Solution	121	35				103	53		
M/6 Ammonium Chloride					167	167			
Potassium Chloride 0.2% in 5% Dextrose		27				27			
Ammonium Chloride 0.9%					170	170			
Nabarro's Repair Solution	20	30		5		45		10	
Dextrose in 0.33% Saline	51					51			
Dextrose in 0.45% Saline	77					77			
Children's Balanced Solution	25	20		3		22		3	23
Adults' Balanced Solution	40	35				40		15	20
Saline — Potassium Mixture in 2.5% Dextrose (Isotonic)	40	40				80			
Potassium Chloride 0.3%		40				40			

By the implementation of the milli-equivalent system in transfusion solutions the physician or surgeon having the results of accurate quantitative assessment of the biochemical derangement when fluid and electrolyte losses have occurred can build his prescription for corrective therapy.

ACID-BASE COMPOSITION OF BLOOD PLASMA



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CLINICAL EVALUATION OF DEQUADIN IN THE TREATMENT OF VAGINAL INFECTIONS & INFESTATIONS

BY

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The incidence of infections and infestations is high and is encountered in all decades of life. Trichomonal vaginalis vaginitis occurs frequently and is probably the most common aetiological factor in the production of leucorrhoea. Lloyd (1945), in an investigation of 1,000 women whose primary complaint was vaginal discharge, found that 44.7 per cent had a trichomonal infestation. Two other causes of discharge often detected are moniliasis and "non-specific" vaginitis. The former is an infestation of the lower genital tract with fungi, most commonly with one of the yeast-like organisms. The latter is a term applied to cases of vaginitis "associated with a mixed bacterial flora, composed of organisms usually regarded as saprophytic or of a very low degree of pathogenicity." (Bornstine and Rakoff, 1953).

In the treatment of vaginal discharge due to these conditions numerous medicaments have been reported as effecting a high percentage of cures. Consequently the following clinical study was instituted to ascertain the value of dequalinium chloride pessaries in the topical treatment of these infections and infestations. Dequalinium chloride ("Dequadin". Allen & Hanburys Ltd.) is an antibacterial substance with a wide antimicrobial spectrum.

For this investigation a special clinic was established in the Kandang Kerbau Hospital for Women, Singapore, to which all patients, whose chief complaint was vaginal discharge, were directed. Each patient who came was examined gynaecologically and all those with evidence of chronic cervicitis and erosion were excluded from the series. Swabs and wet smears, from most patients in the series, were taken at the first examination but unfortunately, due to shortage of staff and pressure of work, proper laboratory evaluation of the drug was not possible.

Altogether seventy patients have been included and of these thirty-six had clinical trichomonas vaginalis vaginitis; thirty had clinical non-specific vaginitis and four had vaginal thrush. Each patient was seen at weekly intervals after the first visit. Those with the above conditions were given a supply of Dequadin vaginal pessaries and asked to insert one pessary well up into the vagina first thing in the morning and to insert another pessary in the same manner at bedtime. At each visit a further supply of the drug was issued and each patient instructed to continue the treatment regardless of a possible intervening menstrual period and regardless of possible relief of symptoms. The therapeutic results are shown in the following table.

THERAPEUTIC RESULTS OF DEQUADIN TOPICAL THERAPY

Disease	*Dosage*	*No. Treated*	SYMPTOMS		*Absent*
			Unchanged	*Improved*	
Trichomonal Vaginitis	Vaginal pessaries 1 b.d. x 14	36	30	5	1
	x 28	35	10	20	5
	x 42	30	1	2	27
	x 56	3	1	1	1
Non-specific Vaginitis	Vaginal pessaries 1 b.d. x 7	30	13	14	3
	x 14	27	7	4	16
	x 21	11	2	1	8
	x 28	3	—	—	3
Vaginal Thrush	Vaginal pessaries 1 b.d. x 7	4	3	2	1
	x 14	3	—	1	2

From the purely clinical aspect the use of Dequadin Pessaries produced a good response in the alleviation of the patients' symptoms. In those cases with trichomonal vaginalis vaginitis it would seem that therapy should be continued for a period of at least six weeks and in cases with non-specific vaginitis for at least three weeks. Patients with vaginal moniliasis were not numerous enough for statistical assessment but the pessary was effective in eradicating the symptoms in the four cases encountered following two weeks' treatment. In the whole series there was no evidence that Dequadin pessaries produced irritation or sensitization.

SUMMARY

1. A series of 70 patients, whose chief complaint was leucorrhoea, were treated with Dequadin vaginal pessaries. Thirty-six cases had clinical trichomonal vaginitis, thirty had non-specific vaginitis and four had vaginal moniliasis.

2. The pessary produced a good result in the alleviation of symptoms.

3. The pessary did not cause irritation or sensitization.

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A CASE OF PECTUS EXCAVATUM

BY

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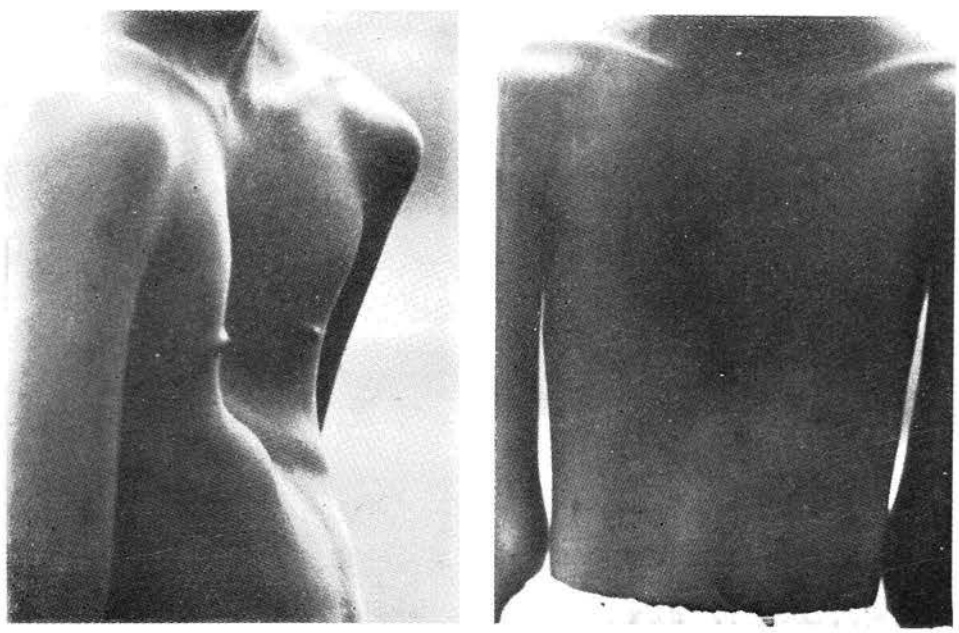
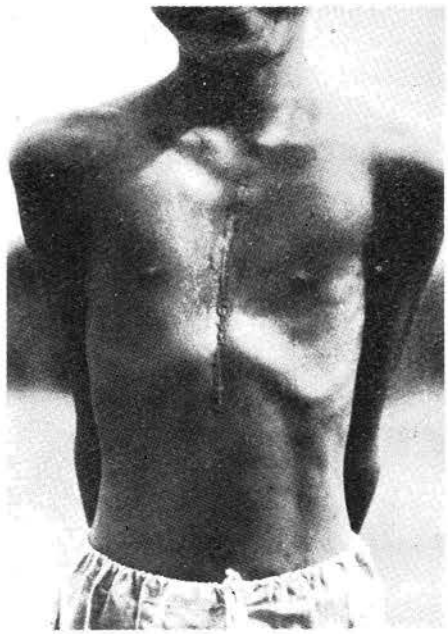
Lady Templer Hospital, Kuala Lumpur

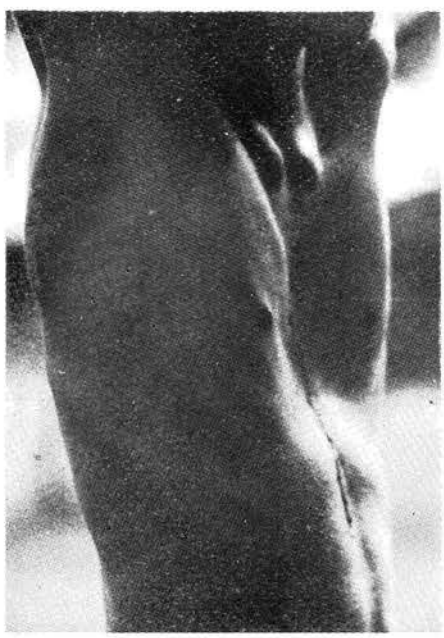
A Malay Girl, aged 9, was admitted to the Lady Templer Hospital on August 12th 1960. She complained of a chest deformity and slight dyspnoea. Her dyspnoea was of a degree that prevented her from playing vigorous competitive games, otherwise it caused no interference with her activities.

She was a thin girl of normal height and cheerful disposition. She suffered from a severe degree of Pectus Excavatum. Her sternum inclined backwards from the junction of the manubrium and gladiolus, the manubrium being in its normal position. The xiphisternum was in contact with the spine in front of the twelfth thoracic vertebra. The costal cartilages were long and inclined sharply backwards from their junctions with the ribs to meet the sternum. Unhappily the ribs themselves curved inwards at their front ends. This produced a broad depression extending laterally to the mid-clavicular lines on each side. In this type of depression only moderate improvement can be achieved (Chin).



Pre-operative Appearance.





Post-operative Appearance.

Though the air entry sounded normal, the chest movements were poor. Her heart was entirely in her left chest.

Her parents were advised that an operation would improve the appearance of her chest and make it easier for her to breathe on exertion. They were warned that complete restoration to normality was unlikely.

The operation to correct a Pectus Excavatum is a severe one. Each element of the deformity is dealt with in turn. Abnormalities maintaining the deformity are the backward angulation of the gladiolus, the elongation and backward curvature of the costal cartilages and the strong band of tissue holding the xiphisternum to the spine.

An incision was made in the mid-line from the manubrium to the centre of the epigastrium. The skin and pectoral muscles were elevated laterally to expose the sternum and costal cartilages. A wedge osteotomy was made with a Hey's saw just below the manubrium. Wire sutures were placed in the bone edges. These would be tied later when the sternum was lifted forwards. The linea alba was incised and the xiphisternum freed without opening the peritoneum. A short strong band was found behind the xiphisternum and divided. This step proved to be difficult for the sternum was almost touching the spine and the band was very dense and short. Once division had been done it was easy to pass a finger up behind the sternum and free it of mediastinal tissue and pleura. The pleura was pushed laterally as far as possible off the deep surfaces of the costal cartilages on each side.

The 3rd, 4th, 5th, 6th and 7th costal cartilages were cut away from the border of the sternum on each side. The sternum could now be lifted forward, hinging on the wedge osteotomy. Lengths of costal cartilage were excised. The length to be excised from each was judged as sufficient to allow reattachment of the remaining cartilage to the sternal border with the sternum in its corrected position. The inclination backwards of the cartilages was corrected by cutting wedges from the fronts of the cartilages with a knife at the point where the cartilage turned backwards.

The wire sutures in the sternal osteotomy were tied. The cartilages were sutured to the sternal edges and a wire loop passed through drill holes in the gladiolus at the level of the sixth costal cartilage. The wedge incisions in the cartilages were not sutured as the intact intercostal muscles held the cut ends in place and reliance was placed on the wire loop to maintain the new position of the sternum until healing was firm.

The ends of the wire loop were brought out of the skin on each side of the incision. The wound was closed in layers.

A plaster of paris shield containing a strong wire bridge was placed over the front of the chest. The ends of the wire loop were pulled strongly forwards bringing the sternum as far forwards as possible. The ends of the loop were then fixed under tension to the bridge. Care must be taken in providing fixation. Without it the sternum will float freely during respiration, possibly causing fatal anoxia.

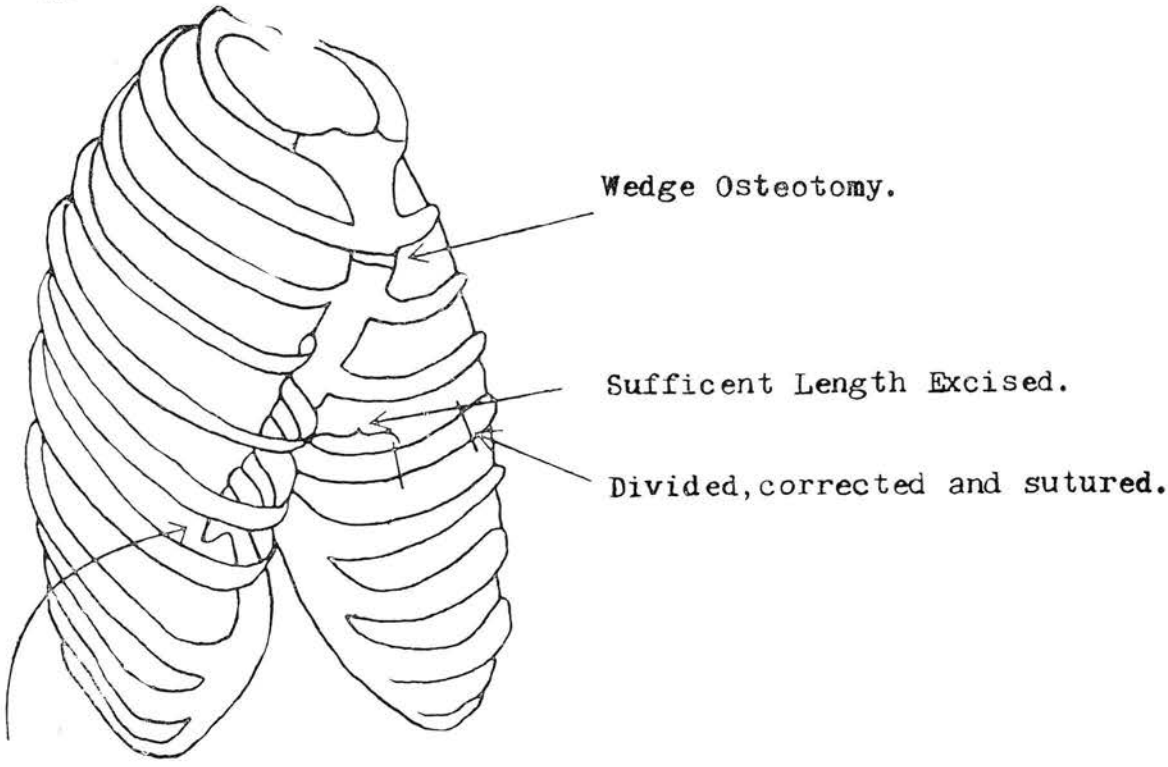


Fig. 1. Oblique view of the deformity.

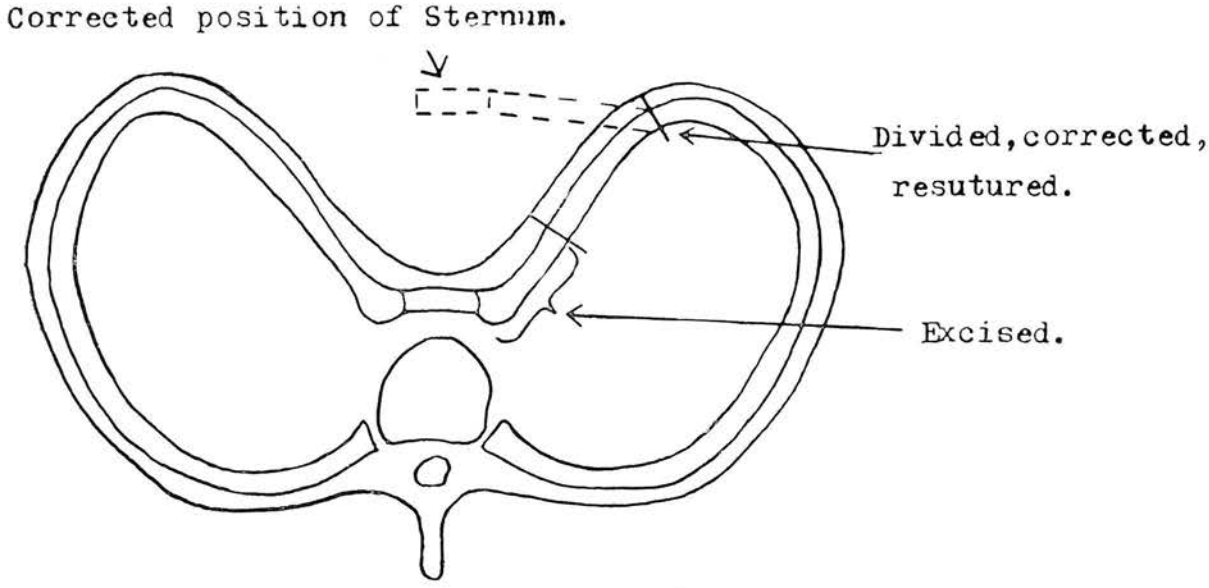


Fig. 2. Transverse section of the deformity.

During the operation the right pleura was torn and sutured.

While recovering from the anaesthetic the patient became cyanosed. Air and some blood were aspirated from the right pleura and the holding wire was tightened.

The total blood loss during the operation was 300cc. Two aspirations of the right chest produce a total of 300cc. in addition to the operation loss. There were no post operative troubles other than this.

For four weeks the child ran about the hospital grounds. Breathing exercises and training designed to teach her to walk upright (so drawing the sternum forwards) were given daily. At the end of this time she was given a short general anaesthetic and the shield and holding wire were removed. She left hospital in good health.

The improvement in the deformity can be seen in the photographs. Before operation the depression was 5″ deep, after operation it was 2″ deep. A radiograph of the chest before operation showed the xiphisternum in contact with the spine, after operation the xiphisternum was 2½″ in front of the spine. Chest movements were greatly improved. The heart did not move back into the mediastinum.

Pectus Excavatum is a congenital deformity. Its cause is unknown. The simple explanation that the band of tissue fixes the sternum at its lower end and holds it back is discounted for no particular reason. It is suggested that the primary defect is overgrowth of the costal cartilages. When this occurs the sternum is pushed backwards and held in this abnormal position. Whatever the cause may be the deformity is an ugly one. In addition it interferes with full movement of the ribs and prevents the upward and downward movement of the sternum because the lower end of this bone is fixed. When the depression is narrow or if it is asymmetrical, affecting one side, a good result can be achieved. The type encountered here which was broad and deep is much more difficult to correct. This case was considerably improved but the final result was imperfect. The greatest benefit this child received from the operation was the greatly increased efficiency of her breathing. She spontaneously commented on this and was very proud of her new powers of respiration.

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DIAGNOSIS AND TREATMENT OF TRICHOMONAL URETHRITIS IN MEN

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BY

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Trichomonas vaginalis was first reported to be present in the genital tracts of male patients by Marchand in 1894. Since then many other instances and series of cases have been published. However, until recently the recorded incidence of infection in men has been low. With improved techniques and increasing interest in non-gonococcal urethritis during recent years, results have indicated that infestation with the parasite is more common than had formerly been supposed. There seems little doubt that the organism is one of the causes of genital infection in the male, though its precise importance in the aetiology of non-gonococcal urethritis is not yet determined.

The results of investigation have varied greatly in different hands. For example, Ackermann (1935) failed to find *T. vaginalis* in the urethral secretions of 37 men with non-gonococcal urethritis, though the parasite was present in the vaginal secretions of six of their consorts. Allison (1943) found *T. vaginalis* in 15% of a group of white patients with gonorrhoea or other genital infections and also in 200 negroes who had been rejected for military service because of venereal disease; 95% of the negro patients had urethral strictures. Feo (1944) found the parasite in 121 of 735 male negroes (16.4%), and in 23 of 191 male white patients (12%). Whittington (1957) found *T. vaginalis* in 15.3% of 326 men with non-specific urethritis. The highest recorded incidence is that of Coutts *et al.* (1955), who claimed that 68% of 2,482 male patients in Chile were infected with the parasite.

The object of this investigation was to examine in detail the clinical and bacteriological findings in a large series of male patients with trichomonal urethritis and to attempt to evaluate various forms of therapy.

MATERIAL AND METHODS

All the patients included in this series attended the Whitechapel Clinic of the London Hospital during the three years from January, 1956, to January, 1959. A detailed history was obtained from each patient and a thorough physical examination performed. Urethral specimens for microscopical examination were taken by the method advocated by Lanceley (1954) by gently stroking the urethral wall with a platinum loop. The slides were examined at once by dark-ground microscopy. In addition, smears of the urethral secretions were also stained with Gram's stain, and examined microscopically under the 1 12-in. objective. Cultures

for *T. vaginalis*, using the liquid liver medium of Feinberg and Whittington (1957), were performed in half of the cases. Stuart's transport medium was also inoculated with specimens from the urethra, and these were later transferred to MacLeod's chocolate agar. In a small number of cases the centrifuged deposit of urine was examined microscopically and cultures were performed. In all cases in which the organism was found attempts were made to persuade the consorts to attend for examination and, if necessary, treatment.

DIAGNOSIS

T. vaginalis was found in 126 cases. During the same three-year period there were 2,300 infections described as non-gonococcal urethritis recorded at the clinic. Trichomonal urethritis, therefore, comprised 5.5% of the total infections diagnosed as non-gonococcal urethritis.

The average age of the patients was 33 years. There were 82 white patients and 44 of negro race.

Eighteen patients (14.3%) had no symptoms referable to the genito-urinary tract. Ninety patients (71.4%) complained of urethral discharge: the type of discharge was very variable, but in most cases was small in quantity, mucopurulent, and most obvious early in the morning before the first micturition; in a small proportion of cases, however, it was frankly purulent, and thick, and was present throughout the day. Itching inside the penis was complained of by 26 patients (20.6%), dysuria occurred in 15 (11.9%), frequency of micturition in 4 (3.2%), two had noticed blood-stained urethral discharge, and one complained of haematuria. Pain and swelling of an epididymis was the presenting manifestation in one case.

At the first examination 80 of the patients (63.5%) were found to have a urethral discharge. In the cases of 38 patients (30.1%) no urethral discharge was seen at the first examination and urethral secretion was found only when the patients attended for early morning tests before passing the first morning urine. No evidence of discharge was found, even on early morning testing in eight cases (6.3%).

T. vaginalis was found in the urethral scrapings in 112 of the 126 cases (88.8%). Cultures were performed in 63 cases and were positive in 58 (92%). In two cases the parasite was found in the centrifuged deposit of urine after scrapes and cultures had proved negative.

Gonococci were isolated from the urethral secretions of eight patients. In most of the remainder, the Gram-stained smear from the urethra showed between 10 and 20 pus cells per 1 12-in. microscopical field, a few epithelial cells, and a variety of Gram-positive and Gram-negative organisms. Cultures of the urethral discharge grew mainly streptococci, staphylococci, diphtheroids, and occasionally *Escherichia coli*.

Urethral stricture was found in 10 patients (7.9%), and all 10 showed a marked tendency to relapse after treatment, but the results of therapy improved after dilatation of the strictures.

The sexual partners of 67 of the patients were traced and attended for examination. *T. vaginalis* was demonstrated in the vaginal secretions of 57 (85%) of them. In several cases in the male the results of treatment were unsatisfactory until the consorts had been examined and treated.

TREATMENT

Little has been written about the treatment of trichomonal urethritis in the male. Liston and Lees (1940) believed that an alkaline urine inhibited the development of trichomonads and relieved symptoms. Strain (1945) favoured calcium mandelate by mouth. Harkness (1950) recommended urethro-vesical irrigations combined with prostato-vesicular massage, especially in cases with involvement of the prostate or seminal vesicles. Disappointing results were obtained with the systemic drug 2-acetylamino-5-nitrothiazole and with the antibiotic "trichomycin" (Catterall and Nicol, 1957), and so far a suitable oral therapy is not yet available.

It has been suggested that the disease is self-limiting in men and tends to spontaneous cure. In this regard, Lanceley and McEntegart (1953) observed three experimentally infected men and found the organism in the genital tract for from 4 to 94 days. The observations of Whittington (1957) on a group of 19 patients with trichomonal urethritis from whom treatment was withheld did not support the view that spontaneous recovery was a common happening. In this series no treatment was given to 14 patients with trichomonal urethritis. Two patients defaulted during follow-up, but the remaining 12 were observed for three months. Trichomonads were found in the urethral secretions or in the centrifuged deposit of urine in 10 of the patients throughout the period of follow-up. In the remaining two the parasite could not be found, though one of them continued to have mild symptoms. Thus the evidence, so far as it goes, indicates that spontaneous cure is probably exceptional.

A small group of 12 patients was treated with oxytetracycline, 250 mg. six-hourly for five days. In two cases the parasite disappeared from the urethral secretions during treatment and was not found again during the three-month follow-up period. In the other 10 cases, trichomonads were present in the urethral secretions throughout the period of treatment and at the end of treatment.

The remaining 100 patients were all treated with urethro-vesical irrigations, using a variety of therapeutic agents. Fifty were each given 10 daily urethro-vesical irrigations, using a 1 in 8,000 solution of potassium permanganate. There were eight defaulters, leaving 42 patients for assessment. Twenty-five (59%) were regarded as cured in that no relapse occurred during the three-month follow-up period.

Thirty patients were treated with daily urethro-vesical irrigations for 10 days, using a 1 in 8,000 solution of oxycyanide of mercury. Four patients defaulted, leaving 26 for assessment. Of these 26 patients, 18 (69.2%) were regarded as cured after a follow-up period of three months.

Lastly, 20 patients were treated with 10 daily urethro-vesical irrigations, using a 1 in 10,000 solution of dequalinium chloride ("dequadin"). There was one defaulter in this group. Of the remaining 19 patients, 14 (73.6%) were regarded as cured after a follow-up period of three months.

The lowest cure rate in this series of patients treated with irrigations was almost 60%, which is higher than might be expected with the best form of treatment in female patients, and it is possible that the difficulties in detecting the organism in the male give an erroneously high cure rate and produce a false impression of the success of treatment.

Discussion

There is general agreement that symptoms may be mild or altogether absent in trichomonal infestations of the male urethra. In the present series the commonest complaint was of urethral discharge, and many patients complained of itching inside the penis. More serious symptoms, such as dysuria, frequency, haemorrhagic discharge, haematuria, and pain and swelling of an epididymis, did occur in a small number of patients.

The value of using both wet smears of the urethral scrapings and cultures in the diagnosis of trichomoniasis has been pointed out by Whittington (1957) and Nicol (1958). The use of the two methods in the follow-up also provides more rigid criteria for the cure of the condition. In 30% of the patients no evidence of urethritis or of urethral disease was detected when the patients were first examined during the day. The diagnosis in all these cases was made by examining the patient first thing in the morning before he had passed the morning urine. This early morning smear and culture test is of inestimable value in the investigation of cases of urethritis from whatever cause.

The most satisfactory method of treating trichomonal urethritis in men at the present time appears to be with urethro-vesical irrigations, using weak solutions of potassium permanganate, oxycyanide of mercury, or dequalinium chloride. If the consort is also treated and sexual intercourse stopped until the parasite is eradicated from the genital tract, a reasonably high cure rate may be expected. If relapse occurs, without the likelihood of reinfection, the possibility of urethral stricture should be considered and urethroscopy performed. It is, however, probable that more satisfactory treatment of this condition must await the discovery of a systemic trichomonicidal substance which is effective when given by mouth or by injection.

Summary and Conclusions

The symptoms and signs of 126 cases of trichomonal urethritis in male patients are reviewed. The use of fresh urethral scrapings and of urethral cultures are recommended for diagnosis and for follow-up. The value of the early morning smear and culture test in diagnosis is stressed.

The results of treatment in 112 cases are described. Moderately satisfactory results can be obtained in urethro-vesical irrigations, using a weak solution of potassium permanganate, oxycyanide of mercury, and dequalinium chloride.

The presence of urethral stricture may be responsible for some cases of failure of treatment and of early relapse.

I thank Mr. Ambrose King for permission to publish these findings and for his constant help and encouragement. This work was carried out under the aegis of the Medical Research Council Working Party on Non-Specific Urethritis with the aid of a grant from the U.S. Department of Public Health.

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SOME OBSERVATIONS ON THE TREATMENT OF TRICHOMONIASIS IN THE FEMALE TREATED WITH DECAMETHYLENE-BIS-(4-AMINOQUINALDINIUM CHLORIDE) (DEQUALINIUM) DEQUADIN

[Reprinted from The Practitioner, 1959, 183: 195]

BY

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The high antimicrobial activity present in polymethylene-bis-*iso*-quinolinium salts led Babbs, Collier *et al*[1] to investigate a large number of related compounds for their antimicrobial activity. The compound, decamethylene-bis-(4-aminoquinaldinium) was found to have wide antimicrobial activity *in vitro*; it inhibited the growth of all the species of pathogenic bacteria that were tested including Gram-positive, Gram-negative, penicillin-resistant and acid-fast bacteria. Furthermore, similar activity was shown against certain yeasts and fungi notably, Candida albicans, Microsporum canis, Trichophyton mentagrophytes, Trichophyton rubrum and Trichophyton verrucosum.

This new synthetic antimicrobial compound, which was discovered and developed in the Research Laboratories of Allen & Hanburys Ltd. has been given the trade name Dequadin and assigned the Approved Name of Dequalinium by the Nomenclature Committee of the British Pharmacopoeia Commission. It is used in the form of the chloride.

The extremely low toxicity of Dequadin and the absence of local irritation on mucous membrane and skin was shown by laboratory experiments on mice and rabbits. Solutions containing 2 mg. of Dequadin chloride per ml. of saline appeared to be without effect on the eyes of rabbits when instilled daily for two weeks. Creams containing 0.4 per cent. Dequadin chloride were applied daily for four weeks to the shaved skin of rabbits and to hairless mice without any reaction.

Administered orally in 5 per cent. suspension in water, 2 gramme per kilogramme Dequadin chloride failed to kill any mice in the series of 20 tested. Rats receiving 0.05 per cent. Dequadin chloride in their drinking water for 26 weeks survived and showed no depression of growth compared with controls. That the therapeutic activity of Dequadin is essentially local was pointed out by Babbs, Collier *et al* who showed that in mice infected intraperitoneally with virulent cocci, Dequadin was effective when given intraperitoneally but not when given subcutaneously.

Clinical reports on the local application of Dequadin have borne out the laboratory findings. Trotter[2] used Dequadin chloride impregnated in gelatin sponge as a bacteriostatic and haemostatic dressing for tooth sockets, in over 900 patients. He found it effective in counteracting and preventing sepsis and in promoting healing.

This compound evoked my interest in the treatment of trichomoniasis in the female as it appeared to be the first non-antibiotic substance which is claimed to inhibit the growth of nearly all common pathogenic bacteria found in the vagina as well as yeasts and, at the same time, being non-toxic to human tissue. While it is admitted that the treatment of trichomonal infections by local application has proved in the past unsatisfactory, it is submitted that the eradication of trichomonas vaginales rests more with the restoration of the normal bacterial flora and consequent production of an acid pH than perhaps with the actual extermination of the trichomonads. It was with this end in view that the compound Dequalinium (Dequadin) exhibiting a high antimicrobial activity was selected for clinical evaluation.

During the one hundred and twenty-one years that have elapsed since trichomonas vaginales was reported by Donné, it is true to state that only a relatively small proportion of cases have been cured in the true sense of the word. It has been observed that the incidence may be as high as 60 per cent. and it is superfluous to elaborate how world-wide the condition has been reported or to stress the varying degrees of discomfort and misery it can produce. That trichomonas vaginales can exist without giving rise to any clinical symptoms until quite mild trauma such as sexual intercourse or devitalisation of the vaginal mucosa due to ill health or from other causes occurs, and then secondary infection may well lower the resistance of the vaginal epithelium when the trichomonas vaginales multiply with great rapidity and symptoms become severe and distressing. The severity of these conditions being such as to preclude sleep and in extreme cases, producing oedema and soreness of the vulva of such a severity as to cause actual retention of urine.

In this particular trial, 43 women between the ages of 14½ and 55 years who previously had failed to respond in any satisfactory degree to any other forms of orthodox treatment including the use of pessaries containing oxytetracycline, immediately responded to treatment with Dequadin although complete eradication of the trichomonas vaginales occurred only in 40 per cent. of cases; however, in the remaining cases all the clinical symptoms were greatly diminished and all but one case in the series obtained marked and rapid relief from their symptoms within 24 to 72 hours after inserting the pessaries.

Patients Presented with Various Predominant Symptoms

The symptoms most frequently complained of were those of vaginal discharge and irritation — only a few complained that the discharge was offensive. Others presented with intolerable irritation of the vulva had very little vaginal discharge; no cases of bartholinitis were seen although several had infection of the paraurethral ducts. One case on examination revealed a cervical polyp and in another, carcinoma of the vaginal wall. Two married women complained of the onset of dyspareunia, and in three cases the male consort presented with a purulent urethritis in which trichomonas vaginales were present in large numbers. All cases in this series were of marked chronicity. Both married and unmarried women were implicated, two cases had venereal infection, one was infected in the urethra only as evidenced by the wet slide method.

Method of Diagnosis

This was made in the clinic and at the time of examination by the wet slide method using dark ground illumination.

Specimens were taken from the posterior fornix and from the urethra by means of a loop. Whenever the patient had actual symptoms it was found that in the majority of cases there were a large number of pus cells present and lesser numbers of E. coli and usually a marked absence of Doederlein's bacilli. About 40 per cent. of cases had a measure of "mixed" organisms present.

Progress of the cases was judged by diminution in the symptoms and improvement in the pus squame ratio. It often took many weeks for the normal bacterial flora to become re-established and in chronic cases this failed to occur even after months of continuous treatment in the older women.

Method of Treatment

Douching was forbidden at any time since in my opinion the introduction of so-called antiseptics into the vagina destroys or upsets the normal bacterial flora, this being conductive to trichomonas vaginales infestation, apart from the risk of reinfection from the douche nozzle.

The patient was instructed to insert a Dequadin Pessary each night and morning, when in the approved position, i.e., supine with knees drawn up and the treatment was continued for a period of 10 days and then after further examination, was instructed to continue the treatment during the remainder of the month, and care was taken to ensure that treatment was continued throughout the menstrual period. At the end of the first 10 days the patient was re-examined and the number of trichomonas vaginales per field present was noted, together with any change in the cytology and bacteriology. The course was repeated even if trichomonas vaginales were not demonstrated in the specimens.

In approximately 40 per cent. of cases, the symptoms had completely subsided, trichomonas vaginales were absent and the presence of a low pus squame ratio with some return of Doederlein's bacillus was seen. In the remaining cases all symptoms were greatly diminished but trichomonas vaginales were present in varying numbers although here again the pus squame ratio had improved.

If left without further treatment, however, some of these cases relapsed after varying periods of from two to sixteen weeks but all except one were brought under control rapidly by reinstitution of treatment. All except one reported that this was the first time that they had any measure of comfort and in the one case in which exacerbation of her symptoms had occurred, the microscopical findings in no way suggested that any deterioration in the cytology of the vagina had occurred and the number of trichomonas vaginales present was greatly diminished. Only one patient complained of the pessary substance running out on rising, and in four cases of non-specific vaginitis all showing alpha haemolytic streptococci rapidly cleared when Dequadin Pessaries were used. Two cases of severe moniliasis following oral antibiotic therapy were also rapidly cleared.

Discussion

That several factors may influence the course of trichomonal infection in the female is suggested in addition to the now accepted sequelae of reinfection from the male consort.

The known high incidence of trichomonal infection which is reported by some investigators to be as high as 60 per cent. which does not necessarily exhibit any clinical symptoms, suggests that some alteration in the habitat must occur before symptoms develop.

That devitalisation of the vaginal tissues either from trauma or secondary infection does occur, and that the altered pus squame ratio and the absence of Doederlein's bacilli in acute trichomonal infections suggests that this may be due to the presence of pathogenic bacteria. The use of the compound Dequalinium with its wide antimicrobial spectrum appears to exert a localised action in the vagina restoring the normal bacterial flora, the result of this action is shown by a decrease in the pus squame ratio and an increase in the number of Doederlein's bacilli. That the ovarian hormones have an important part in controlling the glycogen content of the vaginal cells is confirmed by the fact that treatment with hormones does increase the glycogen content thus enabling the action of Doederlein's bacilli to restore the normal pH of the vagina. It has been noticed in some patients exhibiting a marked degree of psychological instability that on examination they had a reduction in the number of Doederlein's bacilli present.

Summary

Although complete eradication of the trichomonas vaginales occurred only in 40 per cent. of cases of marked chronicity, however, in the remaining cases all the clinical symptoms were greatly diminished. All but one case in this series obtained marked and rapid relief from their symptoms within 24 to 72 hours of inserting the pessary and in those cases where trichomonas vaginales were still present the pus squame ratio had improved and some return of Doederlein's bacilli was seen. A number of cases relapsed after varying periods of from two to sixteen weeks but all except one were brought under control rapidly by reinstitution of treatment with Dequadin.

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This clinical trial is still proceeding, and since the above was written 11 further cases have been treated, including two with monilia infection and the results to date confirm my previous remarks.

Acknowledgments are made to Messrs. Allen & Hanburys Ltd. to whom I am greatly indebted for the supply of Dequadin Pessaries used in this trial. My thanks are due also to Dr. L. L. Banks of the Clinical Trials Department.

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PRESIDENTIAL ADDRESS

Delivered by Dato Dr. Mohd. Din bin Ahmad, President of the M.M.A., at the Annual General Meeting held on 1st April, 1961

Ladies and Gentlemen,

I wish firstly to extend to all members a hearty welcome, in particular those senior colleagues whose counsel will be most beneficial to this meeting. I am deeply appreciative of the honour to me this appointment of President. I express pleasure in paying tribute to the inspiring leadership of the Past President, Dr. Rajahram and thank him for his efforts in the past year. I wish I could attain as much as he had done. Our retiring President ranks equally well with the greatest of the predecessors of the parent associations in Malaya, in his understanding of the problems and needs of this Association, in his despatch of business, simplicity of manner and above all his friendliness. Nor would it be proper for this occasion to pass without a salute to the Hon. General Secretary, Dr. Parampalam and Dr. Visvanathan, before him, who through selfless industry and hard work assisted in the notable achievements of the Association.

I congratulate those who have been selected into office for the coming year and as we all know that the activities of this body are concentrated at three centres, and as the various chairmen at these centres had in the past shown great wisdom over the affairs in their territories as well as co-operating in matters of joint interest, I hope that the same spirit will prevail in the coming year.

There are a few pleasures equal to that of singing the praise of the Association which has our affection and esteem. Though comparatively an infant it has signs of growing big and quickly. The position of membership is satisfactory and its finance is sound. In its activities it is gratifying to note that more and more members have presented papers of interest at the various clinical meetings. The practice of inviting foreign medical experts to address our meetings, whenever they are in Malaya — as was done last year will continue, I assure you. Close liaison will be maintained with the Ministry of Health on this subject.

That our association will move forward there is no doubt and as we go into the incoming year I wish to stress with all earnestness the

necessity for us to keep in mind the targets towards which we aim. It is most important that we do not through lack of vigilance and thought allow our standards to diminish or fade.

We are ourselves keen to keep in the forefront in this developing world, where medical and health problems of today certainly present as varied and stimulating an environment, in which to practise our chosen profession, as any the world has ever known. They have now accompanied the space rockets and gone deep into the seas.

When we look forward, I believe that there are certain avenues which this Association can with profit explore, in all seriousness and sincerity not only from the point of view of improving and enhancing our own standards but also from the angle of prestige, respect, and status as seen through the eyes of those outside the Association.

1. Firstly I refer to the question of membership. A great number of doctors has already chosen to join the association but I feel that we should not feel contented until a higher proportion is attained. More efforts can produce better results, the consequences can only be a stronger association both representatively and financially.

2. The second point refers to the consolidation of the efforts already made in the past year at which many hours were spent in the interest of members and the Association. A follow-through is most necessary as it will be a great pity if those efforts were not carried to their successful end. I believe we have specific committees for various specific purposes and we are also responsible for the publication of a magazine.

3. The third and last point is an important subject which deserves the closest attention and thought of this Association. That this body must in the first instance cater for the interests of its members there is no question; on the other hand however, we have to remember the other duties and responsibilities expected of such an association as ours.

Let me quote 'Sickness is an expensive business for the individual and for the nation, good health is a great asset'. On this theme our National Government has adopted policies with activities directed towards the better health of the nation. Reinforcements are being sent to hospitals, more thought and attention are focussed on the prevention of diseases so that more and more diseases will be stamped out and more

and more people rendered immune. This is a great challenge to the Ministry and I feel that this Association will be rendering conspicuous and gallant service to the country and the people should it adopt steps and activities directed towards the better health of the nation; steps of co-operation and co-ordination with the intentions and aims of Government. Can our Association assist and co-operate in this respect? I put that to you as a subject for the deepest consideration as I regard it is an important subject. Personally I feel that this Association has an important function, namely, to co-operate and assist in any national effort by the Government aimed towards the betterment of the health of the people. I hope there will not be great differences of opinion.

Another point before I conclude and this is to stress and gratefuily to acknowledge the importance of voluntary organisations — particularly those related to health and medicine; although so much has been done the scope of work is almost unlimited. These organisations add to the welfare and happiness of our people and I appeal to our members to join and if possible lead these organisations, as I know one or two related to health lack support and may cease altogether.

I do not propose to weary you any further so I conclude by expressing the hope that:

(a) those who had come to K.L. from the various parts of Malaya have enjoyed themselves;

(b) those who competed for the tennis and golf cups will return happy and relaxed if not accompanied by cups and trophies.

Finally don't forget to attend the dinner tonight.

THE MEDICAL JOURNAL OF MALAYA,
Vol. XV, No. 2, December, 1960.

ASSOCIATION OF PHYSICIANS OF MALAYA

KUALA LUMPUR

17th December, 1960

OPENING ADDRESS AT SCIENTIFIC SESSION

BY

IAN G. W. HILL, C.B.E., T.D., M.B., F.R.C.P., F.R.C.P. Ed., F.R.S.E.

Mr. Chairman, Ladies and Gentlemen,

At the outset may I express my thanks to you for the invitation to be present at your meeting, a privilege which I greatly appreciate. My presence here has been possible through the courtesy of the Government of Malaya and the Honourable the Minister of Health, at whose invitation I am revisiting the Federation. I am of course delighted to have the opportunity of meeting again so many doctors whom I met four years ago when I was last here, and to have the further stimulus of noting the changes and progress in medical services over the years.

I believe, Sir, that an opening address of this type is best cast on a broad basis rather than as a communication on a specific medical problem, and I feel that we might profitably consider together the proper functions of an Association such as this.

These functions I believe are two-fold: on the one hand the provision of a scientific forum for presentation and discussion of observations and results of research, and on the other social, the fostering of friendship among the members. Both are of great importance and I would stress the value of the social side. It is necessary for the attainment of full professional efficiency that men of like aims and attainments should meet regularly — to exchange ideas, to share experience and to criticize in friendly fashion each other's work. In a country such as yours it must be all too easy for men to feel isolated, remote from contact with colleagues of similar interests and to lack the opportunity of discussing problems with their fellows. An annual meeting such as this, when you come from all over Malaya to gather together for a few days is potentially most valuable in counteracting these trends.

I would emphasise particularly the importance of the *discussions* following the papers as they are presented. The better the Society, the livelier the debate — debate which must never be ill-natured but may well be sharp! The essence of such a Society is the brotherhood of the members — and in a family gathering questioning and criticisms may be brisk without loss of family ties or affection. So with you. Well-informed, acute debate on methods or results or conclusions must be recognised as benefitting the *criticised* rather than as a scoring point by a rival! The real proof of health in such a society is that, outside the lecture-hall, the critic and his victim go off amicably to lunch or dinner without animus on either side!

A point which may be made in this connection is that criticism and debate are facilitated if no titles are allowed in your proceedings. It was an unwritten rule of our Cardiac Society in Britain that the surname only of a speaker was used — no professor — this or doctor — that or Lord XY. Simply Jones or Brown or Smith. That implied that a young man could tackle a senior, like David his Goliath, without being overawed at the outset through quoting the great man's title! A very salutary rule which I commend to you!

Again from our experience at home I would commend to you the *social* aspect of your gathering. The great Sir William Osler, who was the guiding spirit in founding our Association of Physicians, laid more emphasis on the annual dinner than on the scientific meeting! After all, one can read one's colleague's work in the journals, but only by social intercourse can one get to know and value the man behind the work.

Now let me turn to a topic which has caused me a good deal of heart-searching during the last few years — consideration of the role of the doctor/scientist in our twentieth-century civilization. There seems to me little doubt that the doctor should be (I do not say he always is!) the best-educated man in the community. In his training a scientific education is broadened by study of the "humanities" and in his practice he gains experience of his fellow men in a manner unrivalled in other professions. By nature of our training we should be incomparably better educated (note I did *not* say "learned") than on the one hand the pure scientist, mathematician, physicist, biologist or what have you — or on the other the man whose studies are bounded by languages, living or dead, by philosophy or letters or arts. One of the dons in my university, a teacher of classics and himself a widely-read intelligent author, has said that doctors today are probably the guardians of civilized tradition. Do we deserve such praise, and do we discharge our trust with honour?

There has been much acrimonious debate in the past over science and art in medicine — their relative roles and importance. It has been neatly said, and I think with some truth, that the art of medicine is to know when and how to apply the science! For my part, I believe well-meaning benevolence uninformed by science is as dangerous on the part of the doctor as cold scientific logic untempered by humanity. And this assessment if correct implies the necessity for a broad training not only in science but in the arts and humanities as suggested above.

And this leads me to consider for a moment the whole question of ethics in medicine today. I do not refer to the simple but fundamental rules of conduct for doctors which are laid down in the Hippocratic code to which we all subscribe — a code whose age of two and a half thousand years must command some respect even in this land of ancient civilization! I refer rather to the difficult ethical questions we all face daily in regard to investigations, experiments and therapeutic trials involving our patients, our fellow-men.

To deal first with "investigations" — tests performed on a patient to help to elucidate the diagnosis of his condition. There is little doubt that thoughtless over-investigation is widespread in the world today. I would group investigations into two broad classes — those which are essential to diagnosis or to guiding treatment, and those which are "nice to know" but which have little or no bearing on management. Some investigations it must be remembered are irksome or painful, some even dangerous to the patient (liver biopsy, etc.), while all investigations add

to the load on our heavily-taxed laboratory services. How many of the blood-urea estimations done in their thousands every day in "routine" fashion are really necessary? How many superfluous tests do we ask for on a laboratory request form when we send up some blood for liver function tests? And how often does a thoughtless or callous doctor push "investigations" in a dying patient to the point of suffering with no possible excuse of potential benefit to the victim? There is, I believe, need for careful appraisal of the end to be gained by each test proposed, especially in relation to the interest of the individual patient.

Turn now to experiments on man — the study of disease processes, of pathological physiology — whereby the investigator hopes to gain data which may elucidate the nature or mechanism of a disease process but which afford no prospect of relief or benefit to the subject of the experiment — how far is it justifiable for the doctor to inflict discomfort, or to court risk to life, in a patient who will not himself stand to benefit in any way. The medical journals of the world today are full of reports of experiments of this type, often with scant reference to the mortality or morbidity attending the procedures employed. It is sometimes quoted in extenuation that the experimenter has first submitted himself to the same ordeal, but this does not logically confer on him the right to do the same to others! Nor does the consent of the patient absolve the doctor from blame, legally or morally, if things go wrong.

Thirdly, the vexed question of therapeutic trials, today so fashionable and so fruitful in results. There can, I believe, be little objection to the comparison of one drug with another in respect, for example, of relief of pain, where life-saving properties are not in question, always presupposing that the experimenter takes full scientific and statistical precautions to obtain valid results — e.g. by the "double blind" technique on an adequate sample, or by sequential analysis. But when a drug is reported to be life-saving — an antibiotic perhaps, or anticoagulants in myocardial infarction — how far is a doctor who himself believes a drug is effective — how far is he justified in withholding this drug from half his patients in the interests of scientific advancement? Would he withhold it from his brother, or from his wife, or refuse it himself?

These are difficult questions and I have no ready answer to offer. The essential role of motive comes in — whether the doctor is honestly seeking truth to benefit humanity or working for some data to publish to bolster his own reputation. But over all other considerations I suggest we remember the age-long predominant preoccupation of the physician — the welfare of his patient as an individual. I do not presume to advise any of you as to whether you should or should not carry out trials or experiments. All I ask is that you search your consciences before proceeding; ponder well and solve your problem in the light of your own ethics. Remember always, you cannot practise medicine in a moral vacuum!

If these remarks have been in serious vein, it is because medicine is a serious subject, one to tax the most brilliant of physicians to the limit of his powers. We are all servants of our profession and of our fellowmen, privileged brothers in an old and world-wide tradition. Against such a conception our paltry differences of race and creed and ability pale to insignificance and our fellowship in a society such as this gains purpose and lustre.

God speed!

THE MEDICAL JOURNAL OF
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OBSERVATIONS OF A RETIRED PROFESSOR

BY

PROFESSOR D. E. C. MEKIE

Emeritus Professor of Surgery in the University of Malaya,
Director of Post-graduate Studies in the University of Edinburgh

It is indeed a pleasure to return to Kuala Lumpur — an opportunity to see my old friends — to see places I have known and enjoyed. I thank you for receiving me and asking me to speak tonight. It is a compliment, for many of you have been obliged to hear me before yet tonight you voluntarily submit yourselves to another session. That is a most gracious gesture. I thank you most sincerely.

Tonight I thought it would be best if I spoke about some matters with which I have been closely concerned since I returned to Scotland. About these matters I can speak from personal observations. I think they will be of interest to you in your great tasks here of sharing in the work of building up this new nation and society. I know something of what you seek and something of what you are doing for I avidly follow from the papers and from the news I get from friends, the events in this part of the world. My interest and affection for Malaya persists, it is not cast off by an act of retirement.

When I returned to Edinburgh in 1955 and met my old friends and colleagues there, we conversed about many things and not least we talked about the changes which had occurred in hospital and medical practice generally. We contrasted the picture of 1935 when I left for Singapore and 1955 when I returned to Edinburgh. The change made by the introduction of the National Health Service makes a fascinating contrast between the conditions under which doctors work, as they were then and as they are now. I know these things as a retired professor, as a spectator, not as a partisan.

The N.H.S. in the United Kingdom is the subject of study the world over. Yearly it is investigated, analysed and commented on by people from many countries — most frequently from the U.S.A. and Canada. Others from the U.S.S.R., from India and a score of other countries have been doing this and many of them I have met.

Let me start by saying that the scheme gives a medical service of the most comprehensive kind. The best of medical care is available to all and in a way it is free to all. Why then should there be doubts and criticisms about its suitability as a pattern for other countries to adopt? Why is it that even in the U.K. there are murmurings and doubts?

I cannot give you an analysis of all these criticisms in a brief period tonight. It is a subject that could form the basis of a course of lectures. It will suffice for our purpose if I indicate some of the fundamental difficulties and perhaps draw one or two lessons therefrom.

Perhaps the greatest difficulty with the N.H.S., when it was formed in 1947-8, was that a vast complex scheme was devised based on a political theory and introduced all at once. There were no precedents to give guidance. The scheme was all embracing and completely new. The country acted like a man presented with a large Chinese makan. It swallowed the lot and accepted the inevitable indigestion as well as the benefit of the food.

The scheme, however sound in theory and admirable on purpose, created overnight a rigid structure into which was forced the whole medical profession. The structure was maintained by a mass of regulations and formulae. A vast civil service department appeared. In order that the scheme should not be wrecked by opposition from the medical profession, Government had perforce offered or agreed to terms acceptable to the vested (not necessarily improper) interests of the practitioners and members of hospital staffs already holding appointments or in practice. The new service inherited or took over large numbers of old buildings at a time when the country, having spent its money and suffered severe damage in the war, had no means of replacing them.

I think it is fair to say that adherence to certain political dogmas added to the difficulties. The medical services had to be "free" in the sense that no direct charge would be demanded from an individual patient. Everyone was therefore forced into an insurance scheme to help pay for the N.H.S. whether he was a millionaire or in penury. And lastly there was the political error of promising everything to everyone no matter the cost or the difficulties. The cost proved to be enormous and has been growing ever since.

Now what to-day are the causes of friction and difficulty? First is that taken by and large a doctor gives his loyalty primarily to his patient. He and his patient together do not fit easily into the tidy scheme which a government seeks to establish. The G.P. in Britain is not a salaried official, nor is he a civil servant. In the hospitals a majority of the senior specialists refuse to work other than on a part time basis. The doctors fear the State as a monopoly employer. They do not believe that their profession can flourish when controlled by regulations and committees. Committees, in the doctors' mind are bodies appointed by the uninterested, formed of the uninhibited to do what is unnecessary. Doctors also fear that their profession may become a political plaything of contending political parties. It is for this reason that Sir Arthur Porritt in his presidential address asked this question, "Have we in the U.K. got the right form of organisation for the N.H.S. — is it not something which requires some other form of administration, planning and control, different from that of an ordinary government department?"

Another source of much questioning to-day concerns the fixed pattern in General Practice and hospital staffing. Doctors have lost their freedom of mobility. To enter any field of practice to-day, whether general or specialised, the young graduate has to follow a precise programme of preparation, on completion of this seek an appointment and when this has been attained he must stick to it for the rest of his life. He has but little chance of a change, either in his earlier years or later. He cannot start as a G.P. and specialise later or *vice versa*. It is even difficult for him to change from one part of the country to another.

The separation between the G.P. and the hospital specialist too has become wider. This is partly due to the developments of medicine itself, but in no small measure it is due to the terms of the N.H.S. There are no longer, even in the smaller hospitals, opportunities for those practitioners with special interests and skills. There could never be another James Mackenzie.

The General Practitioner to-day complains bitterly about the "paper work" — perhaps an inevitable sequel to any form of organised service. But in Britain the Welfare State demands an excessive number of certificates. In all too many instances a medical certificate is needed to draw this benefit or that. It is no good going off work with a headache unless you have a " line " and then another to say the headache has gone before you resume your job. No parent can say Little Willie wasn't fit for school — a Dr. must certify the fact. Above all the doctor most resents (and I'd say this is at the bottom of much of the strife between the Government and the profession) the many petty regulations which affect his everyday life. Each item of service has to be noted, all records kept meticulously to date. This mass of paper is not for the benefit of their patients but to claim payments in small sums from which calculations determine the doctor's income. In many instances doctors complain that the "free service" is in itself a source of difficulty. Whilst the majority of patients are reasonable and thoughtful, a minority abuse their "rights". Demands are made for medical care for the most trivial ailments, unnecessary demands for home visits late in the evening or at night or at week-ends. Demands for medical certificates are made on the slightest or most dubious grounds. Hospital staffs are expected to attend to demands with the promptitude of a salesman obliging an exacting customer. All these experiences have raised in the minds of many the question of whether there would not be a great improvement if a patient had to pay a small sum for each service he seeks.

These things I have observed and I have asked myself whether they have any lessons for the doctors in Malaya. You have a great opportunity — you are an expanding service. You are not weighed down with vast old hospitals. You have a flexible free type of General Practice. As you plan for the future what pattern will you adopt? I shall not presume to tell you but I suggest that you will need to give the deepest thought to the problem. You will do well to study the advantages of this or that system but you must also study its snags. Perhaps the most

important lesson of all is that you gain by going step by step. Experiment and try out before you adopt in permanent form an all inclusive scheme.

Above all remember that as medicine develops there must be change and growth in the forms of its practice — avoid rigidity of mind, of forms and of pattern.

It has been fascinating to look again and observe University work and thought in Edinburgh, to observe the changes that have taken place and contrast Edinburgh with Malaya. Was what I tried to do in the early formative days of the University here in accord with the aims and plans of those working elsewhere? Would our achievements here be regarded in the United Kingdom as good or bad or barely passable?

Both because I have known so many of the Edinburgh University staff for many years (I can say that the Senior Professor in the Medical Faculty is an old student of mine) and as a member of the Faculty I have admirable opportunities for seeing things from the inside; without being a departmental head I can take a detached objective view. The main change has been in the whole assessment of academic purpose and aim. The major objective to-day is research. This applies not only to the departments of basic sciences but also to the clinical departments. Research has always been an important part of the University's work. In the older Edinburgh Medical School I knew thirty years ago, teaching would, I think, have been mentioned first — Teaching and Research — to-day — Research and Teaching. From this has followed a change in the concept of the type of person acceptable as a Professor. Indeed the curious and disturbing situation has arisen that it is easier to become a Professor in a clinical subject by working in a research institute than by working in a clinical department. The University Lecturer in a clinical subject may be passed over in favour of a research worker. Teaching methods too have changed. The older didactic teaching which demands some degree of skill and wide knowledge of his subject from the teacher has been replaced by more informal tutorial discussions, by essays and by a greater insistence that the student works on his own. It is held that the undergraduate develops a better concept of what learning is and of how to learn for himself. I confess I am prejudiced. The son of a teacher and the pupil of one of the greatest didactic teachers Edinburgh ever produced, I find it difficult to accept the proposition that good teaching in the classical style is no longer a worthy academic occupation. Note I say good teaching. I have observed that some of those who are most critical of didactic teaching have little or no ability in that difficult art. A lecture confused in its construction, poorly delivered, merely dictating material which can be obtained from any textbook is to be condemned. Good didactic teaching is an art. The person who is good at it is recognised at once by his students as being a teacher of high quality. For many students such teaching is the one way in which they can learn. It is true that for others this type of teaching is of much less

value. I have always held that there are as many ways of learning as there are students in the class and there are as many ways of teaching as there are of learning.

Here I would tell you of a personal experience. My son failed in one of his subjects in his second professional. His teacher was one of the most ardent supporters of the new method. I undertook to salvage the damage although I now possessed the most meagre knowledge of this particular subject. It was a matter of applying an old teaching technique. Three months later he not only passed but was congratulated on having made such an improvement.

Well now what we are seeing is a modern trend in University patterns which must be carefully studied and assessed with objectivity. The careful guidance of the undergraduate, the instructional obligation of any university is, I believe, something at least as important as research. Research has a glamour and appeal for some men and for some it is so attractive that any other activity that makes calls on their time or energy is regarded as a nuisance and a distraction. Perhaps some of the criticisms by the research worker of the older methods of teaching is a rationalisation of his own limitations.

One thing is certain, however, the importance of research work is increasing. To achieve a significant output of research by university departments, the basic sciences and the clinical departments require adequate staff to devote time to this aspect of their work. Particularly in the clinical departments there must be adequate facilities for it.

Looking back on my own assessment of what should have been asked for my own old department, I confess to have made inadequate demands. In your new developments I trust that you will make good my shortcomings. You are expanding rapidly. Surely the time is near when compromise and "will have to make do" will be over. Do not let yourselves be conditioned to such lines of thought. Can I suggest that you might very well consider carefully (if you have not already done so) whether amendment, addition to, alteration and even abandonment of earlier policies are required?

Let us pass to another field which I have been observing, that of Postgraduate Education. Both as the Director of Studies and as examiner in the Fellowship both in Edinburgh and London, I have been favoured with remarkable opportunities to see and learn. I have been trying to see how far the plans I formulated (but seldom accomplished) when I was in Malaya would meet the requirements of those who seek higher diplomata.

Why is it that so many men fail to pass these examinations? It is easy to say the standard is high or that many men have not the necessary ability. Both these things are true but they are not the whole answer. I would assert that there are many other factors of which the following are perhaps the important ones.

1. Inadequate preparation. All too many candidates assume that all that is required is to attend a course and then sit for the examination. But few if any of the courses are planned to achieve this. They are planned on the assumption that the candidate has already had considerable hospital experience and has read pretty widely, not only the standard texts but also some of the more important journals and is aware of modern ideas in his subject. The courses seek to organise his knowledge and emphasise what is important and deal with recent developments. The courses will *not* make good defective teaching in the basic sciences. In Malaya we can pat ourselves on our backs pretty generously. We have had a quite outstandingly high standard of success in the Fellowship.

It has been a real pleasure for me to see so many of my old students and housemen succeed. One reason for coming back to Malaya is to see how they are getting on in their more advanced work. On the medical side in Edinburgh I would quote the remark of one of our ablest and experienced examiners, "I always like the men from the University of Malaya, they are such nice people and so well trained."

2. Too early specialisation. Neither the F.R.C.S. nor the M.R.C.P. is an examination in a narrow field. When a candidate tells his examiner that he has only done orthopaedics (for example) he must not suppose that the examiner will excuse his lack of knowledge of the other branches of surgery.

3. Inadequate clinical experience. These examinations attach great importance to clinical work. The candidate must show his ability to take a history, make a systematic examination of a patient and then give a rational and practical assessment of how his patient should be managed. Students must not assume that the ability to quote the standard texts is either adequate or essential. In the orals the examiner is trying to find out how the candidate reasons rather than trying to find how many facts he remembers.

4. Lack of experience in the United Kingdom. The disease pattern in the United Kingdom differs from that in other parts of the world. The method of dealing with the problems, the methods of approach to the diagnosis and even the plan of management are not quite the same. You need some time to adjust your thinking so that it becomes in accord with the examiners in higher studies. You want to have your mind attuned to theirs — to get on the same wave length. I believe therefore that a period of work in a United Kingdom hospital is most valuable to men from other countries seeking higher diplomata. I have often found that when a man has failed in an earlier attempt and then takes a job for six months, he does much better in his next attempt even though he may not have had much time for further reading.

5. Mistakes in selection of candidates for overseas study. Such men must be chosen with the utmost care. It is my most unpleasant duty at times to tell some man who has been repeatedly failing that he should

give up and go home and choose some other branch of medicine. Such a man may have spent several years of his life and cost someone large sums of money. He is disappointed and in his own eyes disgraced. Of course he will always quote somebody who passed at the fifteenth attempt and point out that the Colleges have taken the view that they will not disallow reappearances. But he is a tragic figure. It behoves the parents and authorities in Malaya to try hard to prevent such men from ever being given a scholarship to go overseas. Scholarships must be reserved for those who have a reasonable chance of success in a postgraduate examination.

Lastly, as your representative on the Council of the British Medical Association, I have observed closely the workings and the problems of a medical association. Doctors and politics do not properly mix. Doctors want to be left alone to get on with the job of treating their patients. But in modern societies governments interfere in a multitude of ways with medical matters and the work and lives of doctors. Now government departments, however high their purposes and however well meaning and earnest their staffs, are not immune to human frailties and limitations. They can miscalculate, they can over-administer and try to tie everything into neat compartments. On the plea of seeking the welfare of the majority, they can bear heavily on our profession, and our profession is politically weak.

In Malaya you have an expanding and developing medical problem. If the doctors in this country are to exercise a proper influence in shaping these developments, if they are to be able to guard their own legitimate interests, if they are to lead in those projects which will determine the medical pattern here, then doctors must ensure that their own medical association is strong. It must speak with the nearest possible unanimity for the doctors of the country and speak with a full sense of responsibility.

I am charged with the pleasant task of bearing greetings from the British Medical Association to you. We shall watch your progress and the part you play in planning the new form of society in Malaya. We would wish you to be wise and strong.

I have returned to Malaya for only a few days. This is a wonderful experience. I have come back to a country I love and to friends I value. I have talked to you tonight on several matters with my experience and knowledge of this country as a background. In thought I shall never leave Malaya. I am tonight not your old pedagogue, teaching and preaching, but one of yourselves returning from afar, speaking of what he has seen.

I thank you one and all and offer you my sincerest good wishes that they may go with you in the days ahead.

THE MEDICAL JOURNAL OF MALAYA,
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BOOK REVIEW

MODERN TREATMENT YEAR BOOK 1961

Editor: Sir Cecil Wakeley; Bailliere, Tindall & Cox, Ltd., London; 35 -.

Get yourself a distinguished editor, let him choose thirty-one contributors of merit, let each one write on a subject from his own practice, preferably one which has been affected by modern improvements in treatment, print with clear type on good paper, add diagrams and pictures where necessary, bind to form an attractive book. Yearly for many years the Medical Press of London has used this formula with success to produce the Modern Treatment Year Book, a success they have repeated for 1961.

Three quarters of the book is concerned with common conditions likely to be met with in out-patient departments and in a general practitioner's daily experience. Articles give clear advice and reasoning designed to help the doctor in dealing, for examples, with staphyloccal skin infections, skin warts and naevi, catarrh, pschyosomatic disorders in childhood, colonic obstruction, oral treatment of diabetes mellitus and conjunctivitis. These are conditions which are common and whose treatment can be rewarding to the patient and very satisfying to the doctor when carried out correctly.

Contributions on less common conditions round off the contents of the book. We find in this category accounts of polycythaemia vera, congenital anomalies of the alimentary tract, and hyperthyroidism.

Taken as a whole the book holds our interest and painlessly instructs. It is a pleasure to have this year's edition and to recommend it to others.

H. M. MCGLADDERY.

THE MEDICAL JOURNAL OF MALAYA,
Vol. XV, No. 2, December, 1960.

NOTICES

THE NUTRITION SOCIETY

The following is the programme of a symposium to be held in Oxford on Saturday, 15th July, 1961 on

Nutrition and Metabolic Defects

Chairman	:	Sir Hans Krebs, F.R.S.
Dr. H. M. Sinclair (Oxford)	:	Historical aspects of inborn errors of metabolism.
Dr. Philip Evans (London)	:	Clinical account of some metabolic defects.
Dr. L. I. Woolf (Oxford)	:	Nutrition in relation to phenylketonuria.
Professor J. N. Cumings (London)	:	Wilson's disease.
Dr. Paul Fourman (Cardiff)	:	Abnormal calcium metabolism.
Professor A. C. Frazer (Birmingham)	:	Diet and the malabsorption syndrome.

This programme has been arranged as a contribution to the scientific aims of the 3rd International Congress of Dietetics to be held in London 10th – 14th July.

N.B. The titles of papers are not necessarily in final form.

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WORLD FEDERATION FOR MENTAL HEALTH

WORLD MENTAL HEALTH YEAR, 1960. This special period of activity, which was initiated by the World Federation for Mental Health, will come to an end at the time of the Sixth International Congress on Mental Health in Paris, 30th August to 5th September, 1961.

A considerable number of new projects have been initiated or carried out during the period of WMHY in some fifty-five countries. For the sake of the records, the Secretariat of the Federation at 19 Manchester Street, London, W.1. would be glad to be informed of any special activity undertaken *because* of World Mental Health Year, which has not already been notified to them.

Information about the Sixth International Congress on Mental Health may be obtained from the following addresses:—

Paris: Ligue Francaise d'Hygiène Mentale,
11 rue Tronchet, Paris VIIIe.

London: WFMH, 19 Manchester Street,
London, W.1.

New York: WFMH, 162 East 78th Street,
New York 21, N.Y.