dose modification of Mawer *et al*²³ have not encountered ototoxicity.

In managing acute renal failure, we, like most renal units, believe that intensive care, early dialysis, and an aggressive approach to infection provide the basis on which improvements in survival might take place. The mortality of 25% in our series compares favourably with that found elsewhere^{2 5 19} and partly reflects the good survival attainable in acute renal failure from haemolytic and obstetric causes present in 76% of our cases.

Our results justify the establishment of units for managing acute renal failure in tropical Africa. From our analysis of the causes it seems likely that acute renal failure is more common in our environment than is generally realised. The comment by Lee²⁴ that the most important factor in recognising acute renal failure is an awareness of the clinical conditions during which it may arise remains a valid one today.

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Letter from . . . South Australia

New thoughts on organising medical education

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The *Report of the Committee of Inquiry into Hospital and Health Services in Victoria*, with Sir Colin Syme and Professor Sir Lance Townsend as its only members, has just been published and contains some interesting ideas on medical education. They have some relevance for Britain.

Present medical education

At present the medical course in Melbourne consists of three preclinical years, three clinical ones, the award of the MB BS degree, an intern preregistration year, and then registration. Thereafter comes vocational training, varying with the specialty chosen. The universities have the major control over the years to registration, while doctors and the Royal Colleges have their special concern with vocational training. The difficulties are apparent, and a plea is made for better integration of the two parts. Moreover, account has to be taken of continuing education for those who have already specialised, and may have acquired a diploma of one of the Royal Colleges. There are also problems of the supply of doctors and their maldistribution among the specialties, which, of course, include general practice. The universities control the numbers of entrants to medicine, but there is no readily visible control over the numbers in each

specialty. The uneven distribution of doctors between cities, towns, and country is probably more a matter for government than for education.

The medical course is a long one and it takes many years to produce a specialised doctor capable of independent practice. One reason is that entry to the profession, before vocational training can begin, is through the graduate degree, which is followed by at least one year's supervised practice. It is recognised that much of the undergraduate course contains material which is irrelevant to a particular doctor's subsequent career. The problem is that the choice of career for most only emerges; it is not fixed at the outset. Because of this fact the report resists schemes for streaming in the medical course. Streaming implies that if enough students know what they ultimately want to do, then a special shortened course can be devised for them. The fallacy here might well be that education is intended to modify behaviour. Without seeing the full range of medicine the future doctor makes choices on inadequate evidence. Moreover, there is emotional resistance in developed societies to having apparently substandard doctors, whatever they may be called.

Proposals

The report attempts an ingenious solution to these problems, though it emphasises that it is tentative and meant as a basis for discussion. It suggests four years with the university, consisting of three years' basic medical sciences and one year of clinical science. (I have altered the wording slightly, for the authors still refer to preclinical teaching on the university campus and a clinical year in the teaching hospital.) At the end of these four years the student should proceed to the MB, BS. This

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would lead to registration with the statutory authority as a generalist—that is, licensed to practise clinically under the supervision of a qualified specialist practitioner. The next two years would be spent in hospitals with the student pursuing the course that he wishes. After his two years with the non-academic clinicians the student would return for two years with the university. Much of his work there would be in basic medical sciences, though there would also be clinical work. There would then be the award of the mastership of medicine in a certain specialty—for example, MM (internal medicine), MM (surgery), MM (general practice) etc. This would be registered and allow the holder unsupervised practice in that specialty only. By virtue of his MB BS (general), however, he would be able to change his specialty by a further course with the university.

Now, armed with an MM in a specialty, the student could proceed to read for the diploma of a royal college under its aegis. The MM would be a prerequisite for entry, but his two years with the university would have perhaps exempted him from the "primary" examination, and so his course would be essentially clinical. The object of the return to the university is that after two years' supervised clinical work the basic medical sciences would have more relevance for the student, and as a corollary the content of the basic medical science course would have to be changed.

The distribution of doctors between the various specialties would be taken care of by cadetships. These would be under the control of the health commission set up to run all the health services of Victoria. A cadetship would carry a stipend of less worth than the pay of a present resident, for the holder of the MB BS would still be a student allowed to do only supervised practice. By controlling the cadetships the health commission could prevent entry to already crowded specialties and stimulate doctors to go into areas where the commission thought their services would be most needed in the future.

In support of their proposals the authors suggest that the possession of the MB BS would be sufficient for those not intending to do clinical work, especially perhaps those who go into medical administration or basic sciences. Such graduates would be able to earn after four years' study rather than the present six. The two years in supervised clinical practice before deciding on which specialty to enter would allow reasonably wide experience at a general level before narrowing down, though freedom of choice of specialty would be restricted by the operation of the cadetship scheme. The proposal is essentially a three-tier structure with a common entry. The MB BS would be for those who do not wish to do clinical work and the MM for those who wish to work in clinical practice at a lower level of intensity than those who take the higher diploma of a Royal College. The report points out that much of present preclinical teaching would be shifted to the cadetship years coming after the two years' supervised clinical practice.

A pleasant way of passing time

Medical education and its organisation continue to fascinate all doctors. They complain about the relevance of their own particular courses to their present careers. Proper education, they maintain, would have saved them many hours of useless toil. What they want is that their lives should have been made easier—who doesn't? It is relatively easy to plan postgraduate education, since the content of a specialty and its craft can largely be defined. It is the general phase of undergraduate education that gives the difficulties. A cynical friend of mine remarked that the study of medicine is a pleasant way to pass the time until the undergraduate is sufficiently mature to become a doctor. This implies that it does not very much matter what is taught, so long as it has some relevance to medicine. But this laissez-faire attitude does not suit modern medical educators or students. The problem stems from the fact that it is impossible to obtain agreement on what sort of person we want the new graduate to be, what he should know, and what he may be

expected to do. We seem to have an inkling of what to do with him when he has qualified, but not what to do with him before that. Especially is this true of the time spent in the study of the basic medical sciences.

Probably these problems of undergraduate medical education will never be solved to everyone's satisfaction. Moreover, too much is expected of education, for it can never produce a standardised product, which, of course, is ultimately the strength of the medical profession, which might best be seen as a social species responding to a large variety of stimuli. But it does this as a whole, not just as a series of disparate individuals. Not every individual will perceive, or respond, to the stimuli in the same way. It should not be expected, nor should it be striven for. We must surely educate for variety not uniformity. There is then no panacea for education of any kind, and certainly not for medicine. It is only wild theorists who could imagine so. Fortunately the recipients of teaching will resist uniformity because what they are taught is put through the sieve of their own individuality, based in their previous experience. Each person educates himself, and learns for himself, and does not accept and use all that he is taught. The human vessel is not just clay in the hands of the potter: the vessel also determines the final shape, and in the process of education there are many potters.

Accepting this, the medical educator can hope only to lower the barriers to learning and preserve the innate drive or motivation of the students. He cannot impose a pattern, and that is fortunate. The Victorian proposals need to be judged against these criteria, as well as by their practicability and acceptance on a wider scale than just the state, for if they were introduced unilaterally the Melbourne graduates might find their ease of movement restricted, since their comparability with doctors produced elsewhere could be difficult. But at least this new approach recognises that medicine has become much wider than just the clinical care of patients, so that probably not all doctors should be forced through a clinical gate. There should probably be the opportunity for earlier differentiation into anatomists, physiologists, medical biochemists, microbiologists, some pathologists and administrators, with only the smallest exposure to undergraduate clinical studies. The Syme-Townsend scheme would allow for this by separating the clinicians from the others. At the same time the basic scientists and administrators would have some exposure to clinical work—study which is lacking in many of those scientists presently staffing basic science departments. Unwittingly, some of them destroy motivation in medical students by not being able to see the relation of their subjects to the needs of the clinician. The early introduction of supervised clinical practice, for which they would receive some pay, might be a powerful maintainer of motivation in students who wish for a clinical career. Syme and Townsend have again focussed attention on some fundamentals of education and medicine.

What treatment would you advise for our physiotherapist who, if she stays in the hydrotherapy pool, develops an irritating rash which lasts for several days?

The history suggests that aquagenic or cold urticaria are unlikely. If the rash is urticarial, however, she ought not to go into the pool. It is more likely, however, that it is due to chapping of the skin or a mild irritant dermatitis. Both are more common if there is already some degree of xerosis (dry skin) or a tendency to eczema. The pH of the water in nine tested swimming pools varied from 6.5 to 7—more alkaline than the acid mantle of the skin. Warm water of this pH favours hydration and maceration of the horny layer. Chlorine (used as an antiseptic in pools) is known to irritate the eyes; it is also a skin irritant. She should limit her spells in the pool. A rub with soft white paraffin before swimming, or oily cream BP afterwards, might help. I doubt whether a barrier cream has anything to offer other than an emollient effect.