mortality and morbidity in this country are too high.

2. That the postgraduate education of the doctor will drastically reduce these figures now—the Chelmsford system of education is described, and its results prove this point.

3. Medical research will help to investigate genital abnormalities and other unknown conditions which contribute to mortality but any improvement from this can only be expected in the very distant future.

4. That the general-practitioner obstetrician is most anxious to know his subject well, and the only way to achieve this is to afford him better educational facilities—and until these facilities are available to him nobody has a right to criticize his work.

5. That a director of obstetrics for general-practitioner education should be appointed to every university in the country. This person's work should not only include the direction of the teaching in regional institutes of postgraduate obstetrics for general practitioners, but should also include the guidance in the day-to-day refresher education of all obstetricians within the geographical area of the university.

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PERSONAL POINTS OF VIEW

INJECTION THERAPY

Some Cultural Aspects

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THE HYPODERMIC INJECTION IS A well-recognized and well-used method of administering drugs in present-day therapeutic practice. It is such a common procedure that little time may be spent in a busy practice on

consideration of the act itself and its significance to the doctor prescribing the injection, to the nurse administering it or to the patient receiving it.

The hypodermic injection was first described by Wood a little over a hundred years ago, and its introduction and further development have been reported by Howard-Jones (1947) and Mogey (1953). The kinds of drugs administered in this way have been many and varied, but despite the undoubted value of such therapy in many instances, not always have the results of such treatment been beneficial. In fact, the procedure is not devoid of risk, and Scurr (1956) lists such untoward events as allergic responses, abscesses at the site of injection, breakage of the needle and damage to nerves.

The problem of the technique of the injection and the amount of pain involved in the process has received some attention (*J. Amer. med. Assoc.*, 1956 and Travell, 1955) and several new devices have been suggested for minimizing the pain, such as that described by Figge (1956) and the more recent needleless spray injection methods (Kutscher *et al.*, 1962). The very suggestion of such devices implies that the pain of the injection is an undesirable effect, and in no way beneficial to the patient. Such a viewpoint may seem obviously the right one, but the question can be asked if this is necessarily true in all individuals and in all societies. Cross-cultural studies of this point do not appear to have been extensively undertaken. One study on the cultural components in responses to pain, not in particular that evoked by injections, reported by Zborowski (1952) approaches this question, and underlines the importance of understanding a particular society's attitude towards pain and the significance of the behaviour of the patient experiencing the pain, in assisting the medical attendants to deal with the patient in an appropriate manner.

The question of assessing what part of a therapeutic procedure actually helps the patient to improve his health condition has been occupying a worthy place in medical literature for some time, and has occasioned the strict control methods in evaluating the effectiveness of drugs by means of field trials. Balint (1961) and Mears (1961, 1962) refer to those elements in effective therapy which are not directly related to the drugs employed. The same can apply to the injection as a method of therapy which may not necessarily have, in each case, a particular relation to the drug injected. This is probably less true in instances in which, for example, antibiotics are injected to deal with an infective process, and truer in cases to whom analgesics, sedatives or placebos are administered. It is also of importance to realize that a part may be played by the belief in the effectiveness of the injection on the part of the patient.

A personal experience of this nature which questioned the part played by the drugs injected was presented by the author in a paper read to a postgraduate student class as one of a series of presentations in the subject "Culture and Health".* A modified version of the paper is here presented.

Having had considerable experience as a doctor in hospital practice in

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England, my initial contact with patients as a family physician in Israel was something of a disturbing nature. My medical upbringing had given me confidence and ability in using the various therapeutic measures at my disposal, and I had become used to giving advice, medicines, tablets and occasionally injections, for the various ills I encountered. In Israel, however, I found a certain uniformity of request from my patients without particular regard to ethnic group—they wanted injections. It was only with great difficulty that some could be persuaded to receive medicines or tablets, because they were sure that only injections would help them. Naturally enough, the more they demanded, the more my resistance grew. I was convinced that the same therapeutic effect could be obtained whether the substance were swallowed or injected but it appeared that my point of view was not shared by the patients. After some little time it became clear to me that it was not necessarily the substance in the injection that was of such importance, but the actual procedure of the injection itself, and that the substance usually requested by the patient was a vitamin mixture of doubtful therapeutic value.

The inevitable occurred. Under such pressure my resistance diminished, and I found myself prescribing the coveted injections, but at the same time adding substances in tablet form that I was sure would be of more value to the patients, pointing this out at the same time. In the course of time, I became more indoctrinated and it did not pain me to prescribe what I still considered unnecessary injections.

This was the situation when I encountered Mrs Rachel T. She was a widow of indeterminate age, but probably about 70 years old. She had been born in Persia and had immigrated to Israel 50 years ago. She had several children but they lived far from her and she was living alone in one room. She presented a sorry picture—of medium height with a slight stoop, dirty clothes and a rag thrown over her head. What could be seen of her face and hands was not attractive as she suffered from vitiligo, a condition in which there is patchy depigmentation of the skin. Her main complaint was of backache which was apparently due to severe osteoporosis of the spine. She undoubtedly required considerable care, both social and medical, but her one demand was for injections. She had been receiving numerous vitamin injections which could not possibly help the condition in her spine. Communication with her was difficult, not only because she spoke no Hebrew. Tablets and medicines were offered, but this was of no avail. Injections it had to be. However, after several weeks of injections, I again became adamant and refused to allow any more. A short time later she was confined to bed with a particularly severe attack of backache. While visiting her in her room I was dismayed to find a mixture of rags, food and rubbish on the floor. Again treatment in the form of injections was requested and I could hardly refuse her, but made the condition that she clean up her room a little. At subsequent visit a few days later there was evidence that she had attempted to make some kind of order in the room.

In the following months it became easier for me to regulate the periodic administration of some sort of injection and we came to a working arrangement. I learned not to recoil from her repeated kissing of my hand and laying her hand on my head, while she more readily agreed to the periods of intermission from the injections. However, there seemed to be no difference in the relative therapeutic value of the various substances injected, and as a rule she received the vitamins that she had been receiving before I came on the scene. In other words the system

had become stabilized as previously, and she was able to live her life in her own way.

Another patient, Mr Joseph C., aged 37, who had immigrated from Tunisia and was working as a caretaker, had been complaining of severe backache for several weeks following what he described as a strain at work which he sustained when carrying some benches at the request of his employer. No evidence of injury had been revealed by physical examination and x-ray. No relief was obtained from tablets of analgesics or from rubifacients and rest in bed. At his suggestion, intramuscular injections of analgesics were also tried but were of very limited benefit. Attempts at eliciting further information from him were met by an assurance that everything at home and at work was all right. I suggested the trial of injections of novocaine into the offending place, and he readily agreed. The injections were given twice weekly, and from the first were of great benefit. It is of interest to recall the development of the procedure.

At first he would enter, lie prone on the couch, and immediately commence to sweat profusely. At the time of the injection he would tense, but not cry out or resist, and the injection, which took a minute or two, would proceed in silence. He then expressed relief of his pain and would leave. After the first two or three injections I assured him that if he found the procedure painful he could feel free to groan or cry out if he wanted to, and subsequently he did so, but whether he had really felt the need to do so or wished to show me that he was taking my advice, is not certain. I then found that I could use this situation to have a short conversation about his wife and family, who were also under my care, and about his relations with his employer. It became clear that he was finding it easier to discuss certain difficulties in his life situation, and by gradually cutting down the injections but continuing the interviews I found that he continued to experience considerable relief from his pain. He was able to discuss with me his difficulties at home with his slovenly wife and unmanageable children, and it became obvious that the onset of his pain had been related to a quarrel with his employer after which he had to move the furniture. I feel sure that his relief of pain was as much, if not more, a result of these discussions than a direct result of the injections themselves.

Several points for consideration emerge from what I have related. It is clear that my therapeutic behaviour had been considerably altered by constant pressure. It is clear that none of my obstinate actions had altered Rachel's determination to get her injections. On the other hand, I am sure that I used the injections I gave to Joseph as a means of introducing a series of interviews which were to some purpose. In both these instances I do not consider that the substance injected was the main concern.

The questions raised by this paper are not easily answered, but may be of considerable practical importance.

If, indeed, the pain of the injection is an important part of the therapeutic procedure in certain individuals or societies, perhaps the person giving the injection should say " this will hurt you a lot " instead of the all too common " this won't hurt you ", a statement which presumably consoles the giver of the injection but which cannot disillusion the receiver.

A further consideration is that of the possible part played by repeated contact between the patient and therapist as a means of continuing support of the patient through his illness. It may be that it is sometimes desirable to continue this contact without having to give the injection as the excuse, as it were, for the attendance.

In certain instances in particular cultures, the injection may be playing the modern counterpart of the burning or scarification used previously, and until today, by folk-healers. If such a practice as a part of treatment is accepted by the patient as a beneficial act, then the importance of the procedure of the injection is likely to play an important part in the therapeutic process. However, using the injection for such a purpose must be considered in relation to the possible undesirable effects of the procedure.

There seems little doubt that further study in this area of therapy is required, oriented towards those elements culturally determined such as the attitudes of patients and the various members of the medical team to the whole concept of injection therapy.

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