other small, close-knit communities this seems quite astonishing, even allowing for the possible difficulties in giving injections to some patients with Down's syndrome.

I would be most interested to know if this unfortunate failure to offer BCG to these children, originating from preorganisation days, is merely a local quirk or a more widespread phenomenon.

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¹ Crofton, J. and Douglas, A. *Respiratory Diseases*, 2nd edn. Oxford, Blackwell Scientific, 1975.

Propriety of exotic treatments

SIR,—Not infrequently in the press there are reports about parents, friends, and volunteers collecting money to send patients abroad to receive medical treatments not practised in Britain, but which are claimed to be beneficial by those who offer them. For the sake of patients, their relatives, and doctors it is time that some responsible medical body investigated some of these treatments and the methods of their operators.

Recently, for example, the parents of a patient I know were in touch with a clinic abroad. On the basis of a brief medical report and without seeing the patient this clinic offered a course of expensive treatments. Hope springs eternal in the minds of most parents of the handicapped and in their anxiety they are tempted to seize any opportunity which seems to give a chance of improving the patient. The physician in these cases, who has usually little knowledge of the treatment involved, is placed in a difficult position. If he advises the parents against the treatment they might consider him biased or out of date. The layman, who often accepts what he sees in print as absolutely authentic, might regard the existence of allegedly successful treatments abroad as reflecting some deficiency, inadequacy, or conservatism on the part of British doctors or the National Health Service.

It is one of the ethical tenets of the medical profession that the doctor who discovers an effective treatment does not keep this secret for his own profit. The exploitation of the anxiety of parents and relatives who are persuaded to part with a fortune to obtain a treatment of doubtful or unproved efficacy is one form of private practice that deserves legitimate scrutiny.

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Misuse of tubular elasticated bandages

SIR,—The ready availability of tubular elasticated bandages has led to their increasing use for everything from dressings to fractures, from varicose veins to fallen arches. Not only are untapered tubular compression bandages seldom indicated, but indeed they can be positively damaging. My specific concern, which has prompted this letter, is their inappropriate application in vascular disease.

The fact that a leg in which there is venous or lymphatic insufficiency is likely to benefit from elastic compression has resulted in the application of these bandages in every sort of vascular condition. For example, one not uncommonly sees them applied to patients who have the dependent oedema of arterial

disease. In these circumstances, in which the arterial perfusion pressure is already severely reduced, elastic compression may be all that is required to devitalise tissue and precipitate gangrene. So far as venous conditions are concerned it is not unusual to see patients lying in bed with tubular elastic bandages applied from thighs to toes as prophylaxis or treatment of venous thrombosis. There is no evidence to justify this type of compression in the immobile patient. Furthermore, the effect of an untapered elastic tube applied to a limb is to act as a tourniquet at its proximal end. This is made worse by the fact that such a bandage applied to the thigh, unless special precautions are taken, always rolls at its upper end. Indeed, we have seen circumferential ulceration from this cause and aggravation of peripheral oedema is commonplace.

The benefit from elastic compression in venous and lymphatic disorders derives mainly from its combination with activity of the calf muscles. The elastic compression should be maximal distally and the girth should be graduated to match the leg. Only in the more severe forms of venous insufficiency or lymphoedema is elastic compression above knee level necessary. For male patients it is our practice generally to provide knee-length graduated hose. Women usually prefer support tights for cosmetic reasons, but if firm elastic support is required a better combination is knee-length graduated hose which can be disguised by wearing tights on top. Patients are instructed to put on their support hose before rising in the morning. If there is oedema the foot should be elevated above the level of the hip whenever the patient is resting. If the patient is confined to bed the affected leg should be elevated on pillows or the foot of the bed raised on blocks.

There is now a sufficient selection on the market of physiologically satisfactory elastic supports ranging from tapered tubular bandage to fully fashioned graduated hose. It is to be hoped that the untapered varieties will soon be allocated not to limbs but to limbo.

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Compression sclerotherapy of varicose veins

SIR,—The excellent article by Professor P H Fentem and others on leg bandaging for varicose veins (25 September, p 725) gives us more useful information about the effects of static compression. The range of compression (20–100 mm Hg) produced by bandages in his series illustrates very well how unpredictable the effects of bandaging are. While in theory bandages may be applied to give a desired compression, in practice their application cannot be standardised and therefore we feel they should be discarded altogether if they are being applied for their effect on blood flow.

A much more effective way of providing static compression of known degree is by a properly designed, fully tailored, and carefully fitted elastic stocking. I must stress that I do mean properly made elastic stockings and not cylinders of elastic material (such as Tubigrip) which, although often referred to as stockings, quite obviously are not stockings. The degree of compression produced by a stocking may be varied as required by altering the amount of

elastic material incorporated in the fabric from which it is made. Not only does this allow alteration in overall compression but, more important, it allows alteration in compression at local sites on the limb. For example, it is now perfectly simple to make a stocking that gives higher levels of compression over the ankle and calf than over the knee and thigh or vice versa. What level of compression should we apply? This depends entirely on what function is required. Suffice it to say that it will be very different for supine and upright ambulatory patients.

In 1948 Halperin *et al*¹ studied the effects of incremental rises in pressure on the circulation of the limb in supine patients. A 10-mm Hg compression produced a decline in blood flow of 10% and a 30-mm Hg compression a decline in blood flow of 25%. In 1954 Litter *et al*² indicated that a compression of greater than 60 mm Hg was likely to lead to arterial insufficiency. In Professor Fentem's series a level of compression higher than this occurred nine times (18%). It would seem likely, therefore, that a large number of patients are having bandages inappropriately applied. It really is time we discarded bandages as a compressive device. At best they are of limited value and at worst they are positively dangerous.

A sensibly designed stocking which provides a constant, safe compression of known degree would appear to be the answer. Then it may be possible to obtain an accurate assessment of the benefits of static compression in a variety of circumstances.

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¹ Halperin, M H, Friedland, C K, and Wilkins, R W, *American Heart Journal*, 1948, **35**, 221.

² Luter, J, and Wood, J E, *Journal of Clinical Investigation*, 1954, **33**, 798.

Bilateral injuries in childhood: an alerting sign?

SIR,—The examination of children following injury increasingly presents family practitioners with difficulty in establishing whether the trauma sustained has occurred accidentally or not. In order to provide assistance in this situation the area child health service in Leicestershire has nominated a small number of senior clinical medical officers who have developed an expertise in the diagnosis of non-accidental injury by seeing most of the cases which arise within the area and are then available to give advice and, where necessary, attend court to give evidence.

Experience so far has shown that with severe injuries the diagnosis is relatively straightforward and in any event transfer to hospital is essential. Where children present with minor trauma, however, such as repeated bruising and small burns, the diagnosis may prove extremely difficult. After discussions with the staff concerned the problem seemed to indicate a need for more information about the normal range of minor injuries experienced by children under school age.

As a result arrangements have been made through the social services department for Mr M J Sargeant, a reader at Loughborough University of Technology, to undertake a project in which children attending 10 day nurseries in Leicestershire were inspected every day and all injuries, however slight,