in these it was interesting to learn that, for various reasons, they sat or slept with the knees crossed, the leg which was usually uppermost being the one in which the condition developed.

The present series has occurred in the middle-aged, especially in mothers of families using Anderson shelters of inadequate size. Contrary to expectation, neither varicose veins nor cardiac lesions have been observed in greater frequency than one would expect in an average cross-section of the population of the same age. Possibly an Englishman's chivalry to the infirm may account for this apparent discrepancy if the pathology is purely one of capillary stasis. It would appear that the capillary walls in healthy lower extremities are incapable of maintaining their tone against the influence of gravity for an indefinite period if the natural assumption of the horizontal position is denied them.

Relief of the condition has been rapid in every case where shelter arrangements have been modified to allow of rest in the horizontal position without pressure behind the knee, combined with support by a crêpe bandage during the "standing hours" of the day. The chief prophylactic measure in meeting this condition should prove to be the provision of bunks in adequate numbers, but in the time interval which must elapse before this desideratum is achieved calcium therapy may prove of value.—I am, etc.,

BRYANT W. KNIGHT, M.B., B.S., D.C.H.

London, N.W., Oct. 19.

Musculo-spiral Paralysis

SIR,—From reports in the Press this form of paralysis has occurred in those sleeping on hard surfaces in shelters. For some time I was woken up with tingling in the hand of the side on which I was lying. At first I ascribed this to circulatory embarrassment; then noticed that the little finger escaped. I concluded that the median nerve was affected and that probably the musculo-spiral nerve had been compressed during sleep as it wound round the humerus. If the elbow is kept at right-angles to the body the arm cannot be compressed in this way. I have found that I also escape the tingling if the upper limb is kept straight and away from the body, with the forearm pronated. Some can sleep with their lower arm behind them, which should be the best position of all for avoiding this paresis.—I am, etc.,

Stroud, Oct. 21. H. W. HILLS.

Air Raids: Dealing with Casualties at an Incident

SIR,—I read with interest the views expressed by Dr. N. Mortimer Vallely (October 12, p. 498). I discussed this same problem with the local practitioners in my area, and although all of them were earmarked for some particular work in connexion with the Emergency Medical Services it was thought practicable for them to offer their services also for the purpose of attending a street incident. The time-lag between the actual incident and the casualties' reaching hospital and being ready for the services of the surgeon would provide for this. Actually all the practitioners volunteered for this service; a list of names and telephone numbers is posted in the control room, and the medical officer of health will decide the necessity for a call.

Several points were raised in connexion with this service, as follows:

(*a*) That steel helmets, respirators, and torches should be issued to these practitioners as soon as available.

(*b*) That transport should be provided to convey the practitioner to and from the incident.

(*c*) That morphine in appropriate doses and packings should be made available for use by the practitioners.

(*d*) That consideration should be given to the question of adequate compensation in the event of accident, injury, or death whilst practitioners were on duty of the nature referred to.

The question of training personnel in the use of morphine was raised by me some time ago with the appropriate authority, and the view taken was that it would be unwise to issue morphine to first-aid parties unless a qualified medical man was present to authorize the administration, that morphine in particular is not a substance to be used by lay people indiscriminately, and that the advantages to be gained by my suggestion were far outweighed by the tragedies that might well occur. In view of the possibility of obtaining the services of a qualified medical man at the scene of the incident I have not pursued this point further, but the other points quoted above still remain to be settled.—I am, etc.,

Keighley, Oct. 17. H. MAINWARING HOLT.

Radio for Bomb Fragments

SIR,—The exasperating difficulty of finding small metallic fragments in the tissues may be simplified by taking one's wireless set into the operating theatre and connecting an insulated probe to the aerial terminal. Touching a bomb fragment or piece of metal produces a loud and characteristic click or scratching noise in the loud speaker, easily distinguishable from bone fragments or non-metallic objects.

Here is the technique. Take any valve-operated wireless set to the patient, switch on, and open out the volume control. If a programme is heard, tune it out, leaving the set still in a sensitive condition so that a finger touching the aerial terminal gives an audible sound in the speaker. Connect a few feet of wire ending in an insulated probe to the aerial terminal or socket and the apparatus is complete. A diathermy bladder electrode and a piece of single flex make an efficient attachment, or a few inches of stout silver wire covered with valve tubing almost to the end makes an efficient substitute. In either case the wire and probe must be sterilized before use.

Now test out. Any piece of metal in contact with the human body should yield a loud click when the probe touches it and a scratching noise on further contact. Bone and soft tissues should give no audible reaction; if one is heard, damp the receiver down by reducing the volume control. As the noise heard is due to capacity changes in the aerial circuit of the set, touching your patient's A.R.P. badge or tie-pin will give no result, while a ring on his finger or a piece of bomb in his buttock yields a loud and distinct click, the noise in the speaker increasing with the size of the metallic object touched. It is necessary to make actual contact with the foreign body before the signal is obtained, so that accurate location is ensured and subsequent withdrawal should not be difficult. I hope that adoption of this simple device may save the surgeon and his victim many weary hours in the operating theatre after the radiologist has done his best. Lastly, the electrical currents involved are infinitesimal, and there is not the slightest risk of shock to the operator or his patient.—I am, etc.,

Victoria Infirmary, Deal, Oct. 27. JAMES S. HALL.

Repeated Administration of Pentothal

SIR,—The case referred to by Dr. R. M. Davies (October 5, p. 450) is of interest because it illustrates the divergence of opinion on this matter between the laboratory and the operating theatre. Laboratory research is emphatic in counselling the greatest caution in both prolonged and repeated administration of the quick-acting barbiturates, yet those practising these forms of administration in everyday surgery seem to enjoy a curious immunity from the disasters presaged by the laboratory.

The two points of view are presented in glaring antithesis in two articles which appeared last year in the October number of *Anesthesia and Analgesia*. In one of these Carraway of Birmingham, Alabama, adduces 3,810 consecutive cases of pentothal anaesthesia with abundant investigations disclosing no serious complications, though the agent was used for every age group and for all manner of major operations, thirteen of which lasted over two hours, and in one of which thirty administrations were made to the patient over a period of a year. In the other article Reynolds of New Orleans derives from many laboratory experiments the conclusions that the dangers of cumulation are serious, that the heart is liable to sudden failure, that focal necrosis in the liver is frequent, and that there are no warning signs premonitory of these catastrophes. Elsewhere (Dallemagne, *Liége méd.*, 1938, **31**, 197) in laboratory experiments dramatic anaemic conditions, with precarious falls of oxygen capacity, have been recorded after successive administrations of evipan.