

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 Valley (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 (Dalleman, *Liège méd.*, 1938, 31, 197) in laboratory experiments dramatic anaemic conditions, with precarious falls of oxygen capacity, have been recorded after successive administrations of evipan.

Only further investigation into the facts of surgical practice rather than laboratory conditions by many independent observers is likely to explain the discrepancy for the comfort of the anaesthetist. It is therefore to be regretted that information is not available in Dr. Davies's and other like cases as to the functional capacity of the heart, liver, and kidneys, and also the state of the blood picture before and after the administration of the quick-acting barbiturate. In the absence of such precise information it seems that anaesthetists must still suffer qualms in making the fullest use of these drugs, and yet doubt the real validity of their qualms.—I am, etc.,

Birkenhead, Oct. 8.

R. L. WYNNE.

Sulphur and Sulphapyridine

SIR,—I was interested in Lieut.-Colonel R. W. Cushing's article on cerebrospinal fever (October 5, p. 439). I entirely agree with most of his findings, but I must take exception to his statement that during administration of sulphapyridine "eggs are dangerous, as are other foods of a high sulphur content." Is there any scientific foundation for this statement? The cyanosis has been attributed to sulphaemoglobinæmia, but has this ever been proved? Is the cyanosis due to deficient oxygenation of the blood, possibly owing to some chemical or physical effect on the envelope of the blood corpuscles, if not on haemoglobin itself?

Vitamin C appears to have a helpful effect in these cases of cyanosis. Intravenous injection of "redoxon" caused a remarkable improvement in one patient, but I have had as yet no opportunity to confirm this with certainty.

Eggs are a most valuable invalid food. We have given them freely at this hospital during extreme dosage of sulphapyridine with no ill effects whatever. Our mortality in the series of forty-eight cases reported in *Public Health* for September was 4.2%, appreciably higher than Dr. Cushing's excellent rate of 2.9%. We used sulphapyridine soluble and observed the same disadvantages. We also used serum. I think this has an effect, not possessed by chemotherapy, of reducing the effects of the toxæmia, and may have contributed to the rapid recovery of the patients. The average stay in hospital (deaths excluded) was twenty days.

I shall be interested to hear of any confirmation of the vitamin C treatment.—I am, etc.,

The Isolation Hospital, South D. V. HAGUE, M.B., D.P.H.
Petherton, Somerset,
Oct. 12.

Cause of Appendicitis

SIR,—Dr. Josiah Oldfield's theory that appendicitis is due to meat-eating (October 12, p. 505) does nothing to explain its "epidemicity" during the last half-century. The well-to-do among our great-grandfathers were enormous meat-eaters, but there is no evidence that they were particularly prone to the disease under any name. Moreover, our Australian and New Zealand cousins have always eaten about twice as much meat as we do, but are no more prone to appendicitis. For the last fifty years appendicitis has exacted a heavy toll of life, suffering, and material on our population, and the levy (though somewhat modified by therapeutic progress) still continues. Is it not a blot on our profession that no organized effort has yet been initiated to prevent it by a scientific investigation of the causation? The cynic would say it would not pay us to investigate. Must we leave it to the Germans when they can find time for it? Such an investigation would require well-organized team work, though independent observers could make valuable contributions. Historical, ethnological, sociological, physiological, pathological, and clinical evidence should be collected, carefully checked, and collated by a competent body, and the result would almost certainly throw a good deal of light not only on appendicitis but also on many other obscure digestive and "nervous" disorders. Why should not the B.M.A. "go to it"?

Many years ago I propounded what, for brevity's sake, I will call "my" theory, and offered some evidences (which, of course, needed and still need careful checking) under each of the six headings, and these, however shaky they may be, afford a reasonable jumping-off ground for an investigation, since they all tend in the same direction. Scepticism about

the theory leaves us where we are; a serious attempt to disprove it would probably take us a long way forward. While it is not scientific to accept without full investigation a simple and obvious explanation, it is no whit more scientific to turn it down on account of its simplicity and obviousness. "My" theory is both obvious and simple and therefore apparently not worth investigating!

To paraphrase Dr. Oldfield, I fully agree with him that millions of mothers have averted attacks of appendicitis by the timely administration of doses of castor-oil.—I am, etc.,

Ambleside, Oct. 15.

J. PRICE WILLIAMS.

Respirators into Oxygen Apparatus

SIR,—Major H. L. Marriott's very interesting and useful description (October 19, p. 519) of his adaptation of a civilian gas-filtering respirator for use as an oxygen face-piece inhaler prompts me to record certain improvements effected after further experience in the technique of converting and using as an oxygen tent an infant gas protective helmet. The original apparatus was described in the *Journal* of December 30, 1939 (p. 1279), but after repeated use it was observed that patients became uncomfortably hot during a prolonged stay inside the tent and certain modifications were made in the set-up.

A half-inch metal tap (the type with disk base used by gas fitters proved satisfactory and cheap) was fitted with adhesive strapping into the air-tight cloth top of the helmet to act as an outlet for exhaled air. The helmet tent fitted and used in this way on patients sitting up in bed was borne comfortably and with therapeutic advantage for comparatively long periods. A stream of oxygen enters the tent after being cooled by passing through a wide-necked, corked thermos flask nearly filled with ice. The cold inflowing oxygen, being heavier than the warm expired air, tends to keep to the lower part of the tent around the patient's face and mouth, dislodging upwards the warmer expired air, which leaves the tent by the open tap at the top.

An oxygen tent has certain important advantages over any type of face-piece inhaler. It can be used for infants as well as adults, and for patients with face or head wounds. It cannot be dislodged by bedclothes, nor is the restless or apprehensive patient tempted to pull it off. A patient can talk and even eat inside a tent, and an infant may cry comfortably within its walls. Moreover, the infant gas protective helmets provided by the Government are available in most households and institutions, and can be readily and cheaply adapted for oxygen therapy.

I consider that these advantages far outweigh the slight extra consumption of oxygen incurred by employing the tent method of administration.—I am, etc.,

Leeds, Oct. 24.

W. HARTSTON, M.D.

National Dried Milk

SIR,—I am concerned, as no doubt others are, at the issue of the new national dried milk. Inquiry at the local food office informs me that it is a "full-cream dried milk of British manufacture by the roller process and containing approximately 26% fat." This is not sufficient data for its intelligent use. Does it contain, for instance, added vitamins? Nor am I happy about its keeping qualities in view of its scanty wrappings. A slip enclosed in the packet says it should be used under medical direction; yet so far as I know the profession have not been informed of its full composition. A full-cream milk is not suitable for all babies, especially under 3 months old; yet if mothers are to obtain dried milk free of cost they must perforce use this preparation.

Have paediatricians been consulted about its composition, or is it another example of authority's failure to utilize expert advice on the problem, now more vital than ever, of infant feeding?—I am, etc.,

Cardiff, Oct. 16.

A. G. WATKINS, M.D.

** National dried milk is a full-cream dried milk exactly of the nature of all such milks which have been on the market for many years. It is manufactured by the well-known makers of such milks, and it may be assumed that the medical profession is fully aware of its constitution. It does not contain added vitamins or added iron. The carton is of the same