The standard recommended now is a solution of 79.4 mg. of pure crystalline haemin (8.57% iron) or an equivalent amount of another crystalline haemin of lesser iron content (for example 81 mg. of a haemin of 8.41% iron: $\frac{79.4 \times 8.57}{8.41} = 81$), dissolved in 100 ml. of Sorensen's sodium borate buffer pH 9.4,* kept for two days in the ice-box and then diluted to 1 litre with the same borate buffer. (Equivalent to 100% of Haden normal; 15.6 g. haemoglobin per 100 ml. of blood.)

Gibson and Harrison (*Biochem. J.*, 1945, **39**, v, 490) have recently described an artificial standard consisting of a sulphuric acid solution of potassium dichromate, chromium sulphate, and cobalt sulphate. It has been found very satisfactory in this laboratory. It is apparently permanent and the colour is almost identical with that of alkaline haematin solutions formed by treating haemoglobin with sodium hydroxide.—I am, etc.,

British Postgraduate Medical School,
London, W.12.

E. J. KING.

Bornholm Disease in Children

SIR,—The report by Drs. W. M. Jamieson and D. M. Prinsley (July 12, p. 47) prompts us to record an outbreak of Bornholm disease in the Halesowen area of Worcestershire, in which 48 children were seen by us in general practice. We must emphasize that it was not until we had treated twelve cases that we were able to provide a diagnosis, and then when we realized that a disease of infectious nature had occurred many investigations we would like to have carried out were not possible for various reasons.

So far as we know Bornholm disease is a syndrome, and if this is not recognized the diagnosis is perplexing. We believe it is spread by droplet infection. Headache, grunting respirations, and subcostal or abdominal pain would appear to be the main complaints in this disease. A reference to the literature available to us describes this condition as epidemic myalgia, epidemic pleurodynia, acute benign pleurisy, and epidemic muscular rheumatism, none of which seems to fit the clinical picture. The *British Encyclopaedia of Medical Practice* states that the disease occurs chiefly in the late summer months, and attacks the sexes equally, those under puberty being more susceptible.

The first cases were seen early in May. The peak was reached in mid-June and continued until the third week of July, since when only two fresh cases have been treated. Forty of the cases were seen in Halesowen, the other eight being from a country village six miles away. The affected children were between the ages of 2 and 10. Those of school age did not all attend the same school, and the children living in the country district did not attend the schools in Halesowen. There was no noticeable predilection for either sex. The incubation period was between two and eight days. The onset was generally acute, the patient complaining of severe frontal headache which became more intense on pressure, and subcostal or abdominal pain. Three children complained of subcostal pain, and this they said radiated round to the back and was increased by inspiration. Those with abdominal pain described it as sharp and stabbing, occurring intermittently. Vomiting was present in several cases, but no diarrhoea was reported. In a few children there was a history of general malaise for three to four days before the attack.

The children were all obviously ill. The temperature when first seen was in the region of 103° F. (39.4° C.) and never below 102° F. (38.9° C.). Slight injection of the fauces was frequent. Most cases had rapid grunting respirations. No abnormal breath sounds or pleural rubs were detected and the heart sounds were normal. Examination of the abdomen showed tenderness of one side—mostly the left—and there was guarding of the muscles. Rectal examination was negative. Kernig's sign and neck rigidity were not found, nor any lesion of the nervous system. The urine was normal, apart from traces of acetone.

The first twelve cases received nothing but aspirin, and they recovered in ten days, followed by marked weakness. We then tried the effect of sulphathiazole and found that the children felt perfectly well in three to four days. There were three exceptions to this. The condition of the child seemed quite satisfactory until seven days after the apparent cure, when the whole history of events was repeated. A further course of sulphathiazole was given, and the children made a complete recovery. The dose of the drug was 6 to 12 g., according to age, and the cases which relapsed were given a repeat dosage. One child was x-rayed after his relapse, and

a small area of consolidation was found in both lungs in the mid-zones. This child had one symptom not mentioned by the others: when his attacks of abdominal pain occurred he wanted to pass water. Two weeks later he was again x-rayed and his chest was reported clear. Examination of four throat swabs showed *Staph. aureus*; examination of four stools showed no organisms.

As stated above, we had extreme difficulty, before we realized that an outbreak was present, in approaching our cases. Pleurisy, pneumonia, acute abdomen, and meningitis were considered.—We are, etc.,

H. W. BLAND,
G. T. NEWTON.

Halesowen, Worcs.

REFERENCE

Rolleston, Sir Humphry (1938). *Brit. Ency. Med. Pract.*, **2**, 588, London.

Irradiation of Gastric Cancer

SIR,—I am glad to see that interest in the above subject is being revived, and I am sure that it is a field which will repay further exploration. In their article in the *Journal* of Aug. 16 (p. 243) Dr. G. Cranston Fairchild and Mr. Alan Shorter state that direct irradiation of carcinoma of the stomach was first conceived and reported by Fairchild in 1935. Under the heading "A New Method of Approach in Gastric Surgery" in the *Journal* of Feb. 23, 1929, I reported two cases where this method had been used in 1923 and 1924. The object of my paper was to draw attention to the possibility of converting an inoperable into an operable case by preliminary direct irradiation, and in both cases a successful resection was carried out after an interval of six weeks. Both patients were alive at the time that paper was written—in the one case five and a half years and in the other four and a half years after operation.—I am, etc.,

Leeds.

DIGBY CHAMBERLAIN.

Diathermy Dissection of the Gall-bladder

SIR,—I have read the annotation (July 5, p. 21) as well as Mr. R. J. McNeill Love's article (p. 11) on the subject. Obviously, I feel satisfaction about the tribute paid to my electrosurgical operation, which I have developed in all its details in the years 1928–32, so that hardly any chance was left for modifications. But I am rather surprised that this operation apparently has to be rediscovered time and again, and I am compelled to attribute this fact to my inefficiency in giving the method sufficient publicity.

However, it is a fact that in the *Lancet* of March 26, 1938 (p. 750), and of Oct. 28, 1939 (p. 927), I again published an account of my experiences, reviewing at that time more than 1,000 cases. Moreover, as far back as 1932 at the International Congress for Liver Diseases at Vichy I showed two films of electrosurgical cholecystectomy. In one, with a simple empyema, the serosa as covering for the liver bed could be preserved. In the other, a phlegmonous wall of the gall-bladder with abscesses in the liver bed could be demonstrated where the gall-bladder had to be entirely dissected with the diathermy knife and the liver abscesses had to be electrocoagulated radically deep into the liver parenchyma. The abdominal wall was primarily closed and the patient could be dismissed after fourteen days.

Since my first publication in 1928 my method has been widely adopted on the Continent, and in South America especially introduced by P. Mirizzi (1933). M. Thorek has the credit of being the first surgeon to apply this operation in North America in 1934, and Hamilton Bailey and McNeill Love to have applied it first in England (1939).

It is an old, time-honoured tradition in our profession that any trying out of a new method is started with "modifications." In the special case of electrosurgical cholecystectomy—with the exception of M. Thorek's grafting of the falciform ligament—no modification has been recommended which the originator has not already tried out and published.

In the case of an intact serosa, I consider it a wrong move not to spare this valuable tissue for covering, as much as possible. It has proved to be better than any grafted tissue. Furthermore, I feel that many communications on electrosurgical cholecystectomy do not stress enough the necessity of a careful dissection of the cystic duct from the neck down to the common duct, and of an exact exposure of the dangerous

*900 ml. of 0.05 M borax + 100 ml. 0.1 N NaOH.

"eternal triangle" which gives the "second-hand surgeon" so much trouble when operating for "benign strictures." When this dissection is properly done, enough serosa flaps always are found to cover the cystic duct and at least the lower part of the liver bed. When grafting is required, omentum is by far the best tissue. Only in one case, where the region of the cystic duct was blocked by an overlying tumour consisting of a bladder-colon fistula, I left the whole region untouched and was satisfied with the radical electrocoagulation of the opened bladder from inside without tying the cystic duct. The result, in a woman of 50 years of age handicapped by a severe thyrotoxicosis, was excellent.

May I be permitted to give a very brief summary of my experiences with electrosurgical cholecystectomy? This should positively be the operation of choice in badly infected cases in preference to the old cholecystectomy. It sterilizes the whole infected field and prevents the spreading of peritonitis beyond the operating field, still the main cause of a fatal outcome in most statistics. This can best be illustrated by the fact that not one single case of fatal issue through post-operative peritonitis was observed since 1928. The sterilizing effect of the operation can further be seen by the fact, since confirmed by all observers, that the abdominal wall can be closed also in badly infected cases.

Electrosurgical operation is the best method of dealing with liver abscesses and is, in poor-risk cases, well able to replace cholecystostomy, an operation which I have abandoned since the development of the electrosurgical cholecystectomy.—I am, etc.,

New York City.

B. O. C. PRIBRAM.

Penicillin and Blood Coagulation

SIR,—When penicillin powder was introduced for insufflation into wounds after incision I noticed that a wound which had been rendered "dry" began to bleed again after the application of penicillin powder, and occasionally I even found it necessary to secure points which, before the application of the powder, had not been bleeding. Sometimes this bleeding was very troublesome in, for instance, extensive limb injuries with much muscle damage.

It was therefore with considerable interest I read the article by Sir Alexander Fleming and Dr. E. W. Fish (Aug. 16, p. 242) and which explains a phenomenon which I am sure many surgeons operating on war wounds must have observed.—I am, etc.,

Whiston, Lancs.

W. N. CHISHOLM.

Acute Non-specific Diarrhoea and Dysentery

SIR,—I should like to associate myself with the remarks of Dr. G. L. Morgan Smith (Aug. 2, p. 189). During six years' service in India (one year in the Punjab, two in the N.W.F.P., and three in Hyderabad, Sind), and four years in Hong Kong, I never saw a case of diarrhoea which could be unequivocally ascribed to chilling of the abdomen. Personally, when the weather was very hot I invariably slept naked under a fan, and never suffered any ill effects, in spite of the warnings of some of my colleagues and of old "Koi Lais" who informed me that my demise under such conditions would be rapid.

I found that the greatest incidence of diarrhoea occurred (a) in the recent arrivals from temperate climates, and (b) during the winter and early spring, when flies were most prevalent; and I am quite convinced that food or water contamination is responsible for these outbreaks. Anyone who has had any experience of the hygienic conditions of the average cookhouse in India and other tropical countries can only be amazed that gastro-intestinal infections are not more frequent. (This particularly applies to officers' messes, which are generally the least inspected and most unhygienic of any.)

The attitude of mind of those who perpetuate this myth of "chilling of the abdomen" is further exemplified by the (until recently) prevalent ideas about so-called "sunstroke." I have never met anyone who could claim to have seen a fully authenticated case of sunstroke, though I have myself seen several cases of heat-stroke, which usually occurred in the evening when the humidity increased. While in the Tropics I never wore a *topi* except in uniform, when it was compulsory, and

frequently went about without a hat at all, in spite of the many warnings I received. I feel sure that a lot of harm has been done to the European resident in the Tropics by Kipling's lines: "But the worst of your foes is the sun overhead," because it caused unnecessary emphasis to be placed on the *topi* and spine-pad.

In my opinion, the value of a *topi* lies not in the material from which it is made but in the better ventilation it affords by reason of the corrugated head-band around the rim. The criterion I used, both as regards heat and cold, was comfort. Any type of hat, if worn for long periods in the hot sun, will cause sweating and discomfort. Its temporary removal allows evaporation of the sweat, and therefore cooling. In the same way a fan allowed to play on the naked body in bed permits one to obtain that necessary amount of sleep which is essential. Should the temperature drop during the night the bodily reactions will very soon warn one, and one can either turn off the fan or pull up a sheet.

Provided one is in reasonable health, Nature, through our own sensations, will indicate our necessities.—I am, etc.,

H. G. ROBERTSON,
Lieutenant-Colonel, R.A.M.C.

An Infants' Pharyngoscope

SIR,—An infants' pharyngoscope, which I designed several years ago, has since proved extremely efficient. It is simply a pharyngoscope blade that can be adapted to any auriscope. This makes it a valuable adjunct to a practitioner's kit. The pharyngoscope blade has a bayonet catch for use on any electric auriscope, the long length is 3 inches, the short length 2 inches, and the cut-out portion 3/8 inch. It is nickel-plated, made by Down Bros. and Mayer and Phelps.

It fits into the auriscope in the same way that the different sized aural funnels do, and the light from the auriscope bulb, projected along the hollow blade, gives an excellent illumination of the infant's larynx. With the aid of any cranked sinus forceps (I use St. Clair Thomson's cranked forceps), a size No. 4 Jacques rubber catheter can be inserted easily into the trachea. If this is connected up to a low pressure oxygen supply, which is bubbling at the rate of forty bubbles a minute, it will keep sufficient oxygen in the bronchioles to sustain the child until it can recover from its shock and take over breathing on its own initiative. This is useful in cases of asphyxia pallida, especially after operative delivery or prolonged labour where the limp infant refuses to make any attempt at respiration.—I am, etc.,

Littleover, Derby.

LINDSAY O. WATT.

Care and Treatment of Elderly and Infirm

SIR,—The report of the B.M.A. Committee on the Care and Treatment of the Elderly and Infirm (*Supplement*, June 21, p. 133) is very promising, and a step in the right direction. One important group of elderly patients which does not seem to be provided for is that of the old pulmonary tuberculous patient with a positive sputum. The curtailment of the disease generally depends a lot upon the early diagnosis and isolation of these patients. It is hoped that separate accommodation, or communities, suitably equipped for these old patients, will be provided in the proposed geriatric service, their medical treatment being under the supervision of tuberculosis officers.—I am, etc.,

Stafford.

CHARLES D. ROSS.