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.,

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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.