textbook illustration for the effect of primary vaccination. Also the clinical course was only slightly shorter than that of primary vaccination.

This proves again the well-known fact that, especially in the case of revaccination, much better results can be expected from the use of human lymph as compared with calf lymph. The use of human lymph has practically been abandoned because of the danger of transferring syphilis, erysipelas, and other infections. But nowadays syphilis can be easily excluded by serological examination, and penicillin and the sulphonamides have greatly diminished the danger of septic infections.

Under these circumstances might it not be quite reasonable to use human lymph, if available, instead of calf lymph in such persons who as contacts are in immediate danger of developing variola and becoming themselves again a focus of further spread?—I am, etc.,

London, N.W.1.

G. FRIEDLAENDER.

Physical Therapy of Mental Disorder

SIR,—The numerous letters you have published recently and in 1946 on physical therapy in mental disease indicate the interest the profession takes in the subject, and many of the general public show considerable interest also. In my letter in the *Journal of March 23, 1946* (p. 447), I suggested proof of the efficacy of this treatment should be the percentage of recoveries on admissions in the report of the Board of Control. The report for 1945 was issued some time ago, and the recovery rate for that year was 33.2%—males 28.1% and females 36.7%—of the direct admissions, or slightly less than in 1939. The recovery rate for many years has been practically stationary.

The percentage of cases discharged as relieved has, however, risen considerably, the combined number of recovered and relieved being 63%, compared with 48% before the Mental Treatment Act of 1930. In their comments the Board state, "It is difficult to say whether the increased discharge rate is due to improved treatment or to the large number of voluntary admissions." It will be noted it is an increased discharge, not recovery, rate that reference is made to, and at least one popular paper seems to have confused the two. In 1945 the voluntary, temporary, and certified admissions were 50.7, 4.1, and 45.2% respectively. In 1934 the voluntary admissions were 29%. In 1945 the number of voluntary patients discharged as relieved was 5,872, as compared with 2,672 certified, the recoveries being 4,900 and 4,544 respectively. Possibly shortage of staff and beds may have contributed to the relieved discharges.

The stationary recovery discharge rate does not necessarily imply that E.C.T., leptazol, etc., are not of some use. Owing to the advanced average age of the community more senile admissions may have taken place; also there are fewer admissions of recent alcoholic psychoses, the latter a favourable type as regards prognosis. A good many Service patients may have been treated with or without convulsion therapy, and recovered, in places outside the jurisdiction of the Board of Control, and possibly the same applies to a number of civilians. Nevertheless the stationary rate in the mental hospitals does tend to show that the treatment may not be so efficacious as many consider.

In your issue of April 6, 1946 (p. 548), you published a letter from Dr. Ian Skottowe in which he stated that in 1945 the "useful discharge" rate for the Bucks Mental Hospital was 63.4%, or, excluding those over 60, 87.8%, and that E.C.T. was used in not more than half a dozen cases. He did not state the separate percentages of recovered and relieved, but his results seem to compare favourably with those obtained in hospitals where E.C.T. is extensively used, and may be regarded as a useful control experiment. In any form of therapy in mental disease it may be said—it is more or less a platitude—that the better the original make-up of the patient the better the results. The best results with E.C.T. are with the affective psychoses, especially involution melancholia—i.e., where there is no dementia, and where the nerve cells, unlike those in dementia praecox, are durable. If those involution cases associated with arteriosclerosis, etc., are excluded a certain amount of depression at the involution age might be regarded as normal, and some cases of melancholia are merely exaggerations of this. Further, a person having no mental attack until that age must have had a better brain than one breaking down at 20, except perhaps in some cases that have had no severe environmental stress.

Half a century ago Bevan Lewis and Clouston in their textbook gave a 50 to 60% recovery rate in climacteric insanity. We know, however, that a number of involution cases go on to severe agitation,

with distressing delusions, and if in fact E.C.T. prevents this it is indeed a boon. One would like, however, to see statistical proof.

In 1937 two medical commissioners of the Board of Control were instructed to visit Vienna, Budapest, and Frankfurt, also some English hospitals, to study treatment by leptazol and insulin, and their interesting report was published in 1938. I suggest that the time has now come when the Board of Control, the R.M.P.A., or the B.M.A. should appoint a body to make an exhaustive investigation into modern methods of treatment of the insane. So much E.C.T., etc., has been given in British hospitals that there would be no need to visit the Continent, where no doubt the ravages of war have seriously hampered treatment, but a visit to America might be of much use. Even if a satisfactory explanation of the mechanisms of these treatments cannot yet be given—and I understand anoxaemia is held by many to be the explanation in convulsive therapy—a comprehensive report would be of great value.—I am, etc.,

Hastings.

HARVEY BAIRD.

** This correspondence is now closed.—ED., B.M.J.

Sulphone Treatment of Leprosy

SIR,—A considerable amount of attention is being given to the question of the treatment of leprosy by means of the derivatives of diaminodiphenyl sulphone, and once again there is a tendency for treatment to receive precedence over prevention. In view of the fact that I started leprosy work some twenty-three years ago at a time when the enthusiasm for the hydnocarpus (*chaulmoogra*) derivatives was reaching its height, and when responsible authorities stated that leprosy should be eliminated from the Empire within thirty years, I think it might be well if I sounded a warning note. It would be a tragedy if errors of the past were repeated and a belief encouraged that the leprosy problem could be solved by curative measures alone.

Leprosy has its roots in the dim ages and has a disconcerting habit of confounding those who would be over-optimistic. The past twenty-five years are strewn with the results of alleged cures. It therefore would be wise for us to remember this and not publicize too widely a new hope. If we do, administrative authorities may once again find themselves thwarted when they had high expectations that the problem had become easy of solution. Further, we tend to forget the psychological effect on the patients, for those who have severe lepromatous leprosy clutch at a new remedy as a drowning man would grasp at a straw.

We have been using these new preparations in India for the past year or eighteen months, and the following is a brief summary of our preliminary findings:

"Promin."—This substance is too toxic for ordinary use, and patients, in India at any rate, tend to show intolerance after some months.

"Diasone."—In the dosage recommended it is very liable to set up lepra reactions, frequently extremely severe. Fourteen out of twenty-two cases showed such reactions, and five of these fourteen asked that diasone should be discontinued. The reactions could not be attributed to the usual course of the disease, for regular records of the number of reactions and the interval between the reactions before the administration of diasone had been kept. We found, however, that adequate blood levels (5 mg. %) were impossible to maintain.

"Sulphetrone."—This remedy is not likely to be on the market for a considerable time. It is the least toxic of the sulphone preparations and has up to now caused no serious reactions. Further, the levels of the drug in the blood were satisfactory. Sulphetrone, in our opinion, has not been used over a long enough period for definite conclusions to be drawn. All that can be said at present is that workers are encouraged by the clinical improvement in lepromatous leprosy.

In conclusion I should like to emphasize the following points:

(1) The present methods of administration are not practicable of application on an extensive scale, except in institutions where patients are well regimented or sufficiently keen to be prepared to swallow these drugs in varying amounts, from three capsules of diasone to twelve tablets of sulphetrone per day, for long periods (2–4 years).

(2) These drugs should not be used without adequate blood level estimations. Regular blood counts and haemoglobin

estimations are not sufficient. A tendency to take lightly possible toxic effects may end in disaster.

(3) Failure, disappointment, or completely unreliable conclusions are likely to be drawn if used on cases other than the straightforward lepromatous type. It is to be remembered that the minority of the cases of leprosy in most countries are lepromatous.

(4) Even though the diaminodiphenyl sulphone derivatives proved to be effective in lepromatous leprosy, which is everyone's sincere hope, the leprosy problem would not be solved. It is essential to a better understanding of the disease that pathological studies, especially in connexion with cellular reactions in the skin, and epidemiological surveys should be continued. A proper appreciation of preventive measures, both with regard to infection as well as to the correction and prevention of deformities, is equally important. To reduce the problem of leprosy merely to one of therapeutics is to invite disaster and disillusionment.—I am, etc.,

London, N.1.

ROBERT G. COCHRANE.

Gastrectomy and Gall-bladder Disease

SIR,—Drs. C. L. H. Majoor and Th. J. J. Suren (July 5, p. 8) postulate a possible relationship between subtotal gastrectomy and gall-bladder disease appearing subsequent to the operation. A relationship is known to exist between hiatus hernia and gall-bladder disease, and Bockus states that of all the complications of hiatus hernia gall-bladder disease and peptic ulceration occur most commonly.

Might I suggest that similar factors act in the production of cholecystitis (and, later, cholelithiasis) with both these entities? Points of similarity that spring to my mind are: (1) In both hiatus hernia and the post-gastrectomy stomach one has a reduced stomach volume, if one uses the herniated portion in the former for purposes of comparison. (2) Both conditions subject the oesophagus, stomach, duodenum, and jejunum to abnormal degrees of tension and reduce external mobility, and this may in turn lead to distortion of the biliary system. (3) Ecchymosis and mucosal disruption are common to both conditions—in subtotal gastrectomy at the time of operation and in hiatus hernia where strangulation exists or is imminent.

Other comparisons can be made with regard to blood supply, innervation, and emptying times in each. Whatever the causal or contributory relationship each has to the onset of cholecystitis and cholelithiasis, the immediate moral would appear to me to be that surgeons, after removing our stomachs, should leave us with a combination of viscera less closely simulating that seen in hiatus hernia.—I am, etc.,

Beckenham, Kent.

BRYAN WILLIAMS.

REFERENCE

Bockus, H. L., *Gastro-enterology*, Philadelphia, Saunders, 1944, Vol. I, p. 158.

Bornholm Disease

SIR,—Sir Humphry Rolleston¹ describes in the *British Encyclopaedia of Medical Practice* the condition variously known as Bornholm disease, epidemic myalgia, or acute epidemic myositis. It is a disease of the later summer months, more common in patients under the age of puberty, and is apparently transmissible (by a virus not yet isolated) by direct contact, with an incubation period of 2–4 days. It is characterized by pain—specially associated with respiration—whose onset may be very sudden, commonly in the upper abdomen, also experienced in the pectoral muscles and in the back. Slight fever is constant, vomiting is rare. Headache and hiccough are also said to be features. It was previously described on the Danish island of Bornholm, but has also been reported (*inter alia*) in Holland, N. America, and this country by Pickles² in 1933. It runs its course in a week and the prognosis is good. Treatment is symptomatic.

The two cases described here appear to fit in spite of the fact that headache and hiccough were not prominent features. They were seen in a north-east country practice. Pickles² discusses the diagnosis of this condition and states that three useful points are (1) the almost invariable absence of vomiting, (2) increased respiratory rate, (3) rarity or absence of cough. He also mentions intervals of well-being between attacks of the muscle pain. Weterings,⁴ describing Dutch cases, stated

that symptoms tended to pass off in 24 hours, often returning on the third day. These features are found in my two cases, which at first presented a diagnostic puzzle in which acute abdomen, lobar pneumonia, and pleurisy had at some stage to be excluded, but the absence of cough or vomiting, and the fact that there was probably a common cause of the two sisters' condition, led to the conclusion that they were cases of Bornholm disease. I have not seen any other cases to my knowledge.

CASE HISTORIES

Case 1.—An otherwise healthy girl from a good home, aged 9 years. Previous history, nil of significance. Chicken-pox and whooping-cough in infancy, and tonsils and adenoids removed three years ago. She was first seen early on the morning of May 31, 1947, having been awake most of the night with epigastric pain and pain in the right shoulder. Bowels had been regularly opened till May 30. There had been no vomit or cough and no sore throat or coryzal symptoms. The previous day she had been walking a lot on stilts and her parents thought the unaccustomed exercise had strained her muscles.

On examination temperature was 99° F. (37.2° C.), pulse 96, and respirations 24. Tongue furred white. No abnormality was detected in nasopharynx, chest, or abdomen. No rash seen. By the evening her temperature had risen to 100° F. (37.8° C.), pulse was 120, and respirations 32 per minute. She complained that the pain was catching her breath, and the movement of the right base was diminished, but apart from fainter breath sounds at this location no abnormal physical signs could be detected in the chest or abdomen. There was still no cough or sickness.

Next day, June 1, the temperature, pulse, and respirations were normal, and the pains had diminished. On June 2 temperature was normal, pulse 96, respirations 36. Respirations were laboured and she complained of pain in the back catching her breath. No abnormal physical signs could be elicited. She was treated with an acetosalicylic mixture and made a good recovery. When seen four days later she had no complaints and has remained well since.

Case 2.—The older sister of Case 1, aged 12 years, had come in from tennis on May 31 complaining of pains across the front of her chest, which were thought little of owing to her apparent good health and the exercise she had just undergone. The weather was warm at this time, it should be said. Two days later, however, she complained of pains in the chest and left shoulder and upper abdomen and felt feverish. Her temperature was 99° F. and never seemed to exceed this during the ensuing days. She had no cough or sore throat, no sickness, and the bowels were regular. No urinary symptoms were complained of, but there was some malaise.

No abnormality could be detected in the chest or abdomen, and the throat was clear. (Previous history very similar to her sister's and not significant.)

She was also treated symptomatically, and with an acetosalicylic acid mixture. Her pains disappeared, and in four days' time she appeared to have recovered completely and has continued well since.

The two girls had been away with their parents for the week-end before they fell ill. Their movements were: May 22, Corbridge (Northumberland) to Bolton (night stop); May 23, 24, and 25, at Colwyn Bay; May 26, night at Bolton again; and from May 27 on they were back at home in Corbridge. Although the incubation period mentioned by Rolleston is 2–4 days, and the week-end at Colwyn Bay and the night at Bolton would therefore seem to be exempted as the dates of infection, it would be interesting to know if other cases have been seen in those districts lately, as otherwise the source(s) of infection remain a complete mystery.—I am, etc.,

Corbridge, Northumberland.

A. McE. TURNBULL.

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- 1 Rolleston, Sir Humphry, *British Encyclopaedia of Medical Practice*, London, 1936, Vol. 2, p. 588.
- 2 Pickles, W. N., *British Medical Journal*, 1933, 2, 817.
- 3 Pickles, W. N., *Epidemiology in Country Practice*, Bristol, 1939, p. 87.
- 4 Weterings, P. A. A., *Nederl. Tijdschr. Geneesk.*, 1939, 83, 2326, and *Lancet*, 1939, 2, 146.

** An article on Bornholm disease appeared in last week's *Journal* at p. 47.—ED., B.M.J.

Training a Psychiatrist

SIR,—From the recent vitriolic correspondence which the article of Dr. D. W. Winnicott (May 17, p. 688) provoked a point emerges of more general significance than the merits or demerits of physical treatment in mental disorder, and that is the almost fanatical bias of the writers. This is a time of transition for medicine and especially for psychological medicine, and nothing retards progress more than failure to examine a problem with