

them? Is he being quietly told that his blood is unsuitable and the matter left at that, or is he being further investigated with all that this may imply—the possible discovery of congenital and marital cases, the possible prevention of miscarriages and production of further congenitals? Admittedly much tact and discretion will be needed in dealing with these cases, but efforts to follow them up would surely be worth while.

Presumably the transmission of syphilis by transfusion will occur but rarely if most of the blood is being converted into plasma. It is conceivable, however, that there are centres where a register is kept and donors are called upon to give whole blood urgently—possibly weeks after their blood tests have been done. These donors may have contracted syphilis in the meantime and know nothing of it or be in the incubation stage. Dr. J. A. W. McCluskie (*Journal*, February 11, 1939, p. 264) drew attention to the possible danger of transmission of syphilis by transfusion in the incubation period and the possible medico-legal consequences. He also suggested a possible safeguard—the addition of 0.45 gramme of neosalvarsan to the transfused blood.—I am, etc.,

Rotherham, Feb. 6. R. C. WOFINDEN, M.D., D.P.H.

Bipp in Acute Osteomyelitis

SIR.—Probably the most important contribution to the efficient treatment of infected wounds during the last war was the introduction of the bipp method by Prof. Rutherford Morison. During the past twenty years this method seemed to lose favour with many of the post-war generation, who, perhaps, like the Athenians of old, were searching for some new thing. Fortunately Morison's bipp treatment has been powerfully advocated and his technique clearly explained in recent issues of the *Journal* by Dr. William Mackenzie (December 28, p. 917), Prof. R. J. Willan (January 11, p. 62), and Sir Charles Gordon-Watson (February 8, p. 211). May I give my testimony as to its great value in the treatment of acute osteomyelitis.

In June, 1921, a boy of 6 years was admitted to the East Suffolk Hospital under my care. He was very ill; temperature 105° F., pulse 160. The left leg was greatly swollen, inflamed, and acutely tender; there was no involvement of knee- or ankle-joint. A tourniquet was applied above the knee. This is of primary importance to avoid blood infection during the operation. A free incision was made on the inner side of the tibia for the whole extent of the diaphysis. The periosteum was completely stripped from the whole of the diaphysis by a quantity of pus, from which a culture was taken.

I thought it possible that even when the outside of the shaft was bathed in infected pus and the medullary canal similarly infected, the actual dense bony tissue might retain its vitality if completely disinfected on its outer and inner surfaces, and if the surface of the periosteum were also completely disinfected. The pus between the shaft and periosteum was first washed away, and then the surfaces of the bone and periosteum were thoroughly scrubbed with gauze swabs soaked in carbolic lotion 1 in 20, and then with methylated spirit, and finally with ether; layers of sterile gauze were packed between the periosteum and the shaft. Next the medullary canal was laid open for the whole of its length, the marrow, which was infiltrated with pus, was scraped away, and the interior of the canal thoroughly scrubbed with carbolic lotion, alcohol, and ether. Finally strips of gauze saturated with bipp, from which the excess was squeezed out, were placed between the periosteum and bone, and the medullary canal was packed with similar strips. A sterile dressing was then applied and firmly bandaged, and the tourniquet removed.

Next day, when the dressing, which was soaked with blood and serum, was removed, all swelling, redness, and tenderness had disappeared, the leg was of the same size as the other, the temperature and pulse were normal. The strips of gauze were removed on the third day. The wound healed without suppuration except for a small sinus on the metaphysis, which continued to discharge a little pus for several weeks until a very small sequestrum came away and the sinus closed. During this time there was a slight febrile reaction. *Staphylococcus aureus* in pure culture had been grown from the pus, and a vaccine was given. The diaphysis maintained its vitality; there was no sequestration or growth of new bone. A photo-

graph of the two legs taken five years later showed complete similarity, except for the scar of the operation, and a radiograph of the left leg showed an absolutely normal tibia, except for the absence of a medullary canal (*Clinical Journal*, February 19, 1930).

I was not aware at the time of the operation that the original focus, from which infection spreads between the periosteum to the shaft and then to the medullary canal, is to be found in the cancellous tissue of the metaphysis. If that had been opened and treated with bipp the whole limb might have healed within about three weeks.—I am, etc.,

Worthing, Feb. 15.

HERBERT H. BROWN.

Anuria after Sulphapyridine

SIR.—The case of fatal anuria following sulphapyridine in pneumonia reported by Major F. R. Fletcher (*February 15*, p. 242) is very interesting. I am, however, chiefly concerned in the treatment.

Decapsulation of the kidney is only a half-hearted procedure, and pyelostomy is useless unless the ureters are obstructed. The only curative operation is nephropylotomy. The kidney should be incised along the convex border, and a tube inserted down to the pelvis. The kidney should then be lightly sutured, just enough to arrest haemorrhage. In the case reported pyelostomy was performed only on one side. I would like to know why.—I am, etc.,

London, W.1.

F. MACG. LOUGHNANE.

Sterilization of Instruments

SIR.—There are one or two points suggested by Dr. W. N. Leak's letter (*February 15*, p. 254) on the sterilization of instruments which may interest the many who nowadays are helping in the diphtheria immunization campaign. When the empty and sterile needle is put "on the vacant nozzle of the operator's syringe" it will be necessary, before making an injection, to fill the needle with the inoculum by gentle pressure on the piston until fluid begins to emerge from the point. If this is not done, (1) air, possibly contaminated with organisms, will be injected ahead of the inoculum, and (2) the patient will not receive the full dose.

There are times when one has to carry out injections without an assistant and in unhygienic surroundings. May I recommend once more (*Publ. Hlth.*, August, 1940, 53) the use of a spirit lamp, the needle being passed through the flame after each injection, and the stopper of the bottle flamed before each replenishment. Experience comprising thousands of injections in clinics, schools, halls, bed- and sitting-rooms, kitchens, and even—shades of Lister—by the roadside, has shown that this method, combined with iodine sterilization of the skin, is safe and well worthy of trial.

Recently, having all but exhausted one of the 25-c.cm. bottles of A.P.T. supplied by the Ministry, I submitted the dregs to examination by an expert bacteriologist. Culture under both aerobic and anaerobic conditions showed that the residuum was sterile. This bottle had been in regular use for a period of more than three weeks. The majority of the injections were 0.1 c.cm., the remainder 0.3 c.cm.; the syringe held 1 c.cm.; and quite half the injections were given singly during house-to-house visits among the poorer classes, thirty at a time being a very unusual "bag." This culture experiment is encouraging testimony to the efficiency of both the technique employed and the method of preserving the antigen.—I am, etc.,

Cross-in-Hand, Sussex, Feb. 19.

H. LYNTHURST DUKE.

Permanganate for Snake Bite

SIR.—In your September 28, 1940, issue (p. 424) appears an annotation on snake bite. From time to time this subject crops up, and writers not only warn us of the uselessness of permanganate of potash but also point out its dangers. It has been my lot to have attended at least a dozen cases of undoubted snake bite in human beings and five in dogs, so far as I can remember, and one horse, both in Africa and in Australia. My practice has been to make as strong a solution