course of the illness. Pleurisy may happen as a sequela; and if effusion take place, it often becomes purulent quite early. As in other severe fevers, dilatation of the heart sometimes occurs, and is recognized by displacement of the impulse."

QUESTION FOR NEXT WEEK.

Describe the post-operative care of tonsil and adenoid cases.

THE VALUE OF SALICYLIC ACID IN THE TREATMENT OF WOUNDS AND TYPHOID FEVER.

The following article by Dr. Albert Wilson, which appeared in the *British Medical Journal* of February 20th, is of considerable interest and value at the present time. Dr. Wilson writes:—

I was so impressed by the value of dry salicylic acid powder in the treatment of the wounded soldiers in France that I recently formulated the following series of experiments *in vitro*. I am indebted to Mr. J. Gilbert Hare, now Bacteriologist to the Hospital of the Alliance, Yvetot, for affording me the use of his laboratory and giving personal supervision; and also to Mr. Dudley-Ward for the accurate carrying out of the technique.

Some have attributed to this drug a saponifying action, but this is surely a term limited to alkaline hydrates in the presence of fats. It has, however, a liquefying action, but of what nature I cannot explain. I was repeatedly struck with its effect in causing dense, often fibrous, sloughs to disappear quickly. The bright red granulating surfaces which followed negative any suggestion of caustic action. The offensive odours would disappear in perhaps twenty-four hours. It caused neither pain nor irritation, however freely applied to wounds. This important fact should be noted by any who may hesitate to use it on account of its well-known solvent action on horny material—corns, &c. It may even be introduced into the abdomen in septic cases.

In former years, when I had a number of cases of typhoid fever to treat, I obtained a large measure of success by the use of salicylic acid as an intestinal antiseptic; and the same in diphtheria (dissolved in glycerine). In typhoid fever I gave it in water, which is rather difficult, as the drug must be rubbed down in a mortar; or mixed with bismuth and mucilage as a vehicle. It had a distinct effect, not only on the temperature, but also on the whole clinical picture.

The effect of salicylic acid in varying strengths was tested on the organisms which attack the intestinal tract as well as those responsible for inflammation, septicæmia, and tetanus. The ordinary agar was found to take up only to 0.5 per cent.; higher strengths than this caused liquefaction of the media—the very process which is useful in removing sloughs when the powder is freely dusted on the wound.

The strengths of the agar tubes were arranged from 0.5 down to 0.025 per cent. of salicylic acid. In these strengths it had no effect on the *B. coli communis* nor on the *B. pyocyaneus*. In 0.5 per cent. the *B. pyocyaneus* did not produce the typical greenish-blue tint in the media, but a faint reddish-brown colour; below 0.5 per cent. the colour was unchanged.

B. dysenteriæ (Shiga), *B. typhosus*, *Staphylococcus aureus*, and *B. subtilis* were all absolutely prevented growing by the addition of salicylic acid to the media in strengths of 0.1, 0.2, 0.3, 0.4, and 0.5 per cent. They grew at 0.05 and 0.025 per cent.

Streptococcus pyogenes, *B. diphtheriæ*, *B. pneumoniæ* (blood serum agar used for this organism) were likewise prevented from growing by salicylic acid in strengths of 0.2, 0.3, 0.4, and 0.5 per cent.; but grew on strengths 0.1, 0.05, and 0.025 per cent.

An active culture of *B. tetani* was procured, and salicylic acid was mixed with glucose agar in the same strengths, but at 0.05 per cent. the medium became liquid, and would not solidify. Strict anaërobic precautions were observed. After a week's incubation it was found that the organism grew freely in strengths of 0.025, 0.05, and 0.1 per cent.; on the other hand, the organism was absolutely inhibited in strengths of 0.2, 0.3, and 0.4 per cent.

I strongly commend these experiments to the consideration of those engaged in the present campaign. In typhoid fever I suggest the use of 3 to 5 grain doses of salicylic acid given with milk, so as to be carried more quickly into the bowel, or in suspension with bismuth and mucilage. The effect of excessive dosage in normal individuals is a slight diarrhœa, with dryness of the evacuations. In typhoid this would not give rise to any complication nor depression.

For wounds I would urge the use of salicylic acid as a first dressing on the field to be applied by the patient or his comrades. A convenient method would be pads of salicylic wool between layers of gauze, after the style of gamgee tissue. In hospitals it could be dusted on from an ordinary perforated container.

*

previous page next page