disease should be thoroughly heated, or, if practicable, burnt, and careful search for lice on the skin and in the hair should be made, and these precautions should be observed before admission to hospital. After admission to hospital careful watch should still be kept for lice, in order to be certain that none have escaped detection, and for each patient arrangements should be made for the direct discharge of urine into vessels containing a 1 in 20 solution of carbolic, or other efficient disinfectant.

Incontinence of urine in typhus is not uncommon in severe cases, and special arrangements to prevent infection from soiled linen must therefore be made. In quiescent populations, provided that the points referred to are rigorously insisted upon, there is no danger in attending typhus patients, as is shown by the remarkable immunity enjoyed by doctors and nurses in modern hospitals.

In times of war the difficulties of controlling the spread of the disease are greatly enhanced, and the reason, therefore, for wholesale destruction of infected clothing whenever practicable, and of disinfection of urine, becomes correspondingly increased. In dealing with grave epidemics, such as are now ravaging Serbia, the first essential for successful control is an unlimited stock of hospital tents, which should be frequently moved, unlined clothing which will stand dry heat, and large galvanized tanks containing carbolic solution for the reception of infected urine.

Diagnosis.

The most important points on which, when taken together, a positive diagnosis of typhus can be based are :—

1. The characteristic rash.
2. The smell of the skin.
3. A history of previous cases of the disease in the same house, especially if associated with lice.
4. The stuporous condition of severe cases presenting the rash.
5. The precritical fall of temperature.
6. The enormous relative and absolute increase in the large mononuclear cells in the blood.
7. The presence in blood films of the large diplobacillary and diplococcal organisms described by numerous observers.
8. Their presence also in fresh urine.
9. The presence in the centrifuged deposits of fresh urine of the minute Gram-positive, Gram-negative, pleomorphic organism described by Hort and Ingram.
10. The isolation and cultivation of the same organism from the blood and cerebro-spinal fluid.
11. The results of injection of cultures of these organisms, or of fresh typhus blood, into *bonnet* monkeys.

Treatment.

The general treatment of typhus is that of any acute infective disease, and should be carried out whenever possible on open-air lines, due regard being paid to the avoidance of exposure.

Owing to the fact that previous to 1914 no satisfactory evidence was available as to the nature of the causative agent of the disease, specific treatment by vaccines or by antiserums has not been possible for typhus. It is, however, not unreasonable to hope that confirmation of the etiological relationship to typhus of the organism described by Hort and Ingram will lead to the establishment of efficient protective, and possibly curative, methods of specific treatment.

OUR PRIZE COMPETITION.

DESCRIBE THE VARIOUS KINDS OF FRACTURES AND THEIR COMPLICATIONS.

We have pleasure in awarding the prize this week to Miss L. Aronovich, 2nd Western General Hospital, High Street, Manchester.

PRIZE PAPER.

Fractures are usually divided into two main groups : simple fractures, in which the bone is broken but no wound of the skin occurs, and there is no admission of external air to the site of injury ; and compound fractures, where there is direct or indirect connection between the fracture and the external air owing to laceration of the skin or mucous membrane. In fracture of the base of skull one of the deeper air-sinuses may be opened up, and thus it becomes compound without any obvious external lesion.

Fractures are complete or incomplete according to the extent of the fracture, and according to whether or not the continuity of the bone is entirely interrupted. Complete fractures may be : (*a*) "Transverse" ; (*b*) "oblique," usually due to indirect violence ; (*c*) "spiral," when the force acts in a rotary direction as well as longitudinally ; (*d*) "longitudinal," due to fissuring or splitting of the bone in its long axis, most commonly the result of gunshot injuries ; (*e*) "comminuted," when the bone is broken into more than two pieces ; (*f*) "impacted," when the broken fragments are driven into each other and become wedged ; (*g*) "multiple," when more than one fracture exists ; and (*h*)

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