

## OUR PRIZE COMPETITION.

### WHAT IS RABIES? HOW IS IT TREATED AND NURSED?

We have pleasure in awarding the prize this week to Miss E. A. Noblett, 2nd Northern General Hospital, Leeds.

#### PRIZE PAPER.

Rabies—hydrophobia, an acute specific disease due to the inoculation of a specific virus in rabid animals.

The disease is almost invariably contracted from the bite of a rabid animal, usually the dog; but the cat, wolf, and fox may also transmit it. The virus is in the saliva, which may be infective for a day or two before symptoms have developed. By no means all who are bitten are affected; wounds on uncovered parts are far more dangerous than wounds through clothing. Bites on the face lead to specially acute symptoms.

Since the Muzzling Order of Mr. Walter Long, the disease has become extinct in Great Britain and Ireland for several years. Recently cases of rabies in dogs have developed in Cornwall, and further development of the disease is being prevented.

The average incubation period is from six weeks to two months. It may be as short as a fortnight or as long as three months.

The main feature of rabies is hyperæmia and congestion of the central nervous system. There is also congestion of the pharynx, œsophagus, and stomach.

*Symptoms.*—The wound by which the poison was introduced, as a rule, rapidly heals, and for a time nothing happens to attract the patient's attention to the scar. In about six to eight weeks or so, the scar may become painful and nervous disturbances manifest themselves. The patient becomes sleepless, peevish, irritable, and experiences a choking sensation about the throat. When the disease is fully developed there are intense muscular spasms, the respiratory muscles and those of deglutition being specially involved. The features may be horribly contorted or wear an aspect of extreme terror; the saliva is not swallowed, and as it collects in the mouth, along with thick mucus from the congested fauces, it causes noisy attempts at ejection, attended with great difficulty.

The face is usually flushed or livid during the attacks, and there may be raving delirium, delusions, and hallucinations. It should be noted that, though the patient is very thirsty,

he is afraid to drink, as any attempt at swallowing brings on the spasms at once; even the sound of running water will excite the attacks. After two or three days the patient may pass into the "paralytic stage," which, however, is more common in animals. He generally dies of exhaustion in from two to ten days after the development of the characteristic symptoms.

*Treatment.*—The bitten person or a bystander should at once suck the wound, and, if practicable, ligature the part above the injury. The wound should be cleansed and cauterised as soon as possible. The Pasteur treatment should be commenced whenever it is ascertained that the dog was rabid. It is practically certain to prevent the disease if begun within a week of the bite.

When the disease is developed, treatment is merely palliative. Morphia and chloroform for the spasm, and cocaine to diminish the sensitiveness of the throat, are the best remedies.

*Pasteur's Method.*—The virus is intensified by passage through a series of rabbits until a maximum degree of virulence is reached (virus fixe). The spinal cords of such rabbits gradually lose their toxic property by drying, and after fourteen days are no longer toxic. The virulence is in inverse proportion to the length of the exposure. Pasteur's treatment consists in the injection of an emulsion of spinal cord thus prepared, beginning with a cord which has been exposed for fourteen days, next day using one which has been less attenuated, and so on until a cord dried for only three days is used. In ordinary cases it takes nine days to reach this strength, and the treatment continues till the fifteenth day. When the incubation is likely to be short, as in bites about the head and face, an "intensive" treatment is employed. The details vary somewhat in different institutions, but the result is the same; the patient is rendered immune during the incubation period, and rabies does not develop. The treatment bears the same relation to hydrophobia as vaccination does to smallpox in those who have been exposed to infection.

An anti-rabic serum has also been used prophylactically, but does not replace the Pasteur method.

#### HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss R. E. S. Cox, Miss S. Wild, Mrs. Farthing, Miss K. Jones, and Miss M. Fuller.

#### QUESTION FOR NEXT WEEK.

Give instructions for making anti-vermin underclothing for the troops; also for disinfecting soldiers' clothing at the Front.

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