

OUR PRIZE COMPETITION.

WHAT DO YOU KNOW OF ANTHRAX, AND OF THE METHODS OF INFECTION WITH THIS DISEASE? WHAT ARE THE NURSING POINTS TO BE OBSERVED IN CARING FOR SUCH A CASE?

We have pleasure in awarding the prize this week to Miss Jean M. Scott, Royal Waterloo Hospital, Waterloo Road, S.W. 1.

PRIZE PAPER.

Anthrax, malignant pustule, wool-sorters' disease, or splenic fever, is a very serious disease, occurring chiefly in South American and Australian sheep and cattle, and in those who tend them, or have the handling of their skins or fleeces, even long after removal of the latter from the animals. Occasionally epidemics have broken out, one occurring in 1880 at Bradford, which led to official enquiry and subsequent investigations into the pathology of the disease. Lately infection has been brought from Japan with the import of shaving brushes from that country.

The bacillus *Anthraxis* is the cause of the disease, a comparatively large, non-motile bacillus which grows in chains, multiplies by fission, and, when in contact with oxygen, by spores. These spores possess great vitality, retain life for years in dried skins or fleeces, and are not destroyed by boiling, freezing, or by a 5 per cent. carbolic solution, nor by the gastric juice like many bacilli.

The disease in man is divisible into two primary forms—external and internal.

The external form is caused by direct inoculation of the skin, or of a superficial mucous membrane; and the internal by entrance of the virus into the respiratory or alimentary passages. The disease is rarely, if ever, transmitted from one patient to another; but the discharge from the malignant pustule is dangerous.

External form.—After inoculation takes place a few hours or days elapse, a red itching pimple appears, which is converted into a vesicle, the surrounding tissues become red and brawny, gangrene occurs at the focus of inflammation, and around this a ring of secondary vesicles form, there is much œdema; the neighbouring lymphatics become enlarged, feverish symptoms set in, the patient may die of sudden syncope, exhaustion, coma, or, if the neck is affected, œdema of the glottis.

Internal.—Caused by inhalation or swallowing of dust laden with spores; when they have been inhaled this takes the form of pneumonia with hæmorrhages, the pleural sacs fill with serum and the lungs collapse; when swallowed,

ulceration of the stomach and intestines, with gangrene of the spleen.

The brain and its membranes may be involved, but death usually occurs before this stage.

Treatment.—Prophylactic treatment is most important. Thorough disinfection by super-heated steam of all contaminated fleeces and those coming from places where anthrax is known to exist. All fleeces should be handled wet, and the workers' hands washed and clothes changed before eating.

For the external form, opening of the pustule, or complete excision of it, cauterising the wound, and injecting strong antiseptics into the surrounding tissues. Encourage oozing from the wound, the object being to prevent the entrance of the bacilli into the veins. As a dressing, biniodide and glycerine compresses aid to draw out the lymph. A serum found by Selavo, taken from asses' blood, has been known to cure, even after the bacilli had entered the blood stream; by its use excision may be avoided.

Support the strength, especially by concentrated animal diet; quinine is sometimes given, and strophanthus or other heart tonics.

The internal form is by far the most dangerous, death usually occurring in from two to six days after the onset. Of the treatment when fully developed symptoms are present little can be said. The complications must be dealt with as they arise, and the symptoms relieved as much as possible. The strength must be kept up by means of stimulants, heart tonics, and by the administration of meat broths and other fluid nourishments. Serum treatment will probably be employed; the pleural fluid is usually evacuated. When the cerebral and spinal centres are involved there may be delirium, convulsions and tetanic spasms; and in the gastro-intestinal form hæmorrhage from the bowel. Death may be preceded by coma, or the patient may be conscious to the last.

When recovery occurs, convalescence is usually very prolonged.

HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss Wilkinson, Miss M. James, Miss P. Thomson, Miss D. Jennings.

Miss Wilkinson writes that after inoculation a red inflamed pustule appears; this increases in size, and eventually a bleb filled with pus appears on the summit.

QUESTION FOR NEXT WEEK.

Describe the Psychic Temperament and its place in Progressive Evolution.

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