OUR PRIZE COMPETITION.

WHAT IS MENINGITIS ? MENTION THE CAUSES AND SYMPTOMS (1) OF TUBERCULOUS MENINGITIS, AND (2) OF MENINGOCOCCAL MENINGITIS. WHAT POINTS SHOULD BE OBSERVED, AND HOW SHOULD THEY BE DEALT WITH BY A NURSE CARING FOR A PATIENT SUFFERING FROM THIS DISEASE ?

We have pleasure in awarding the prize this month to Miss Winifred Moss, the County Hospital, Bedford.

PRIZE PAPER.

Meningitis is inflammation of the meninges, or the membranes which cover the brain and spinal cord. It is caused by the entrance of micro-organisms, and is associated with the formation of an exudate consisting sometimes of fibrin and sometimes of pus. In a rigidly closed cavity like the skull there is very little room for any extra fluid, and this exudate presses on the brain causing symptoms of irritation, or what is known as compression. Meningitis may be described according to the membrane most affected. The dura mater alone may be inflamed, and the condition known as pachymeningitis, this form usually being a surgical condition caused by injury or disease of the skull. When the arachnoid and pia mater are affected the disease is called leptomeningitis. It is known as cerebral meningitis when the membranes covering the brain alone are affected ; spinal meningitis when the membranes covering the spinal cord are attacked, and cerebro-spinal meningitis when both are involved.

The causes of tuberculous meningitis are usually either infection from a person who is suffering from pulmonary tuberculosis, or infection from milk which contains bovine tubercle bacilli. Small tubercles are deposited on the membranes and set up inflammatory changes which cause increase of pressure in the cranial cavity.

The onset is usually gradual, with loss of appetite, disinclination for exertion, and fretfulness. Constipation and loss of weight are common, and sleep is usually disturbed, with grinding of the teeth and night cries. During the day there is persistent headache and vomiting which apparently has no relation to food. The length of this stage varies ; it may be short, a day or two, or may last for weeks or months with varying degress of remission and improvement. Eventually, however, signs of brain irritation occur. There is a marked increase in the unfavourable symptoms, together with squinting which is temporary at first and finally permanent, dislike of light and sound, drooping of the eyelids, and stiffness of the limbs. This stiffness tends to increase and convulsions often occur. The typical meningeal cry may be heard at this stage, and although sometimes slight improvement may occur, usually the intracranial pressure symptoms increase. The breathing alters, sometimes to the Cheyne Stokes type, the pulse gets feeble and there is increasing loss of consciousness, ending in death.

Meningococcal meningitis is due to the infection of the cerebro-spinal system with the meningococcus of Weichselbaum. The carrier is the chief source of infection, the organism being present in the naso-pharynx and distributed by coughing and sneezing, and reaches the cerebro-spinal system by the blood after inhalation.

The onset is usually sudden, severe headache, giddiness, rise of temperature and stiffness of the muscles at the back of the neck being the first symptoms. This stiffness increases, with marked head retraction and arching of the muscles of the back, opisthotonos. There is restlessness, dislike of light or interference, and delirium, and in severe cases coma ensues and the patient dies in a few hours. The rash which has given the disease its characteristic name of " spotted fever " may appear on the first or second day ; it is hæmorrhagic in appearance, but not always present.

The points to be observed in nursing a case of meningitis include keeping the patient as quiet as possible, isolated in a darkened room. He should be moved very gently, as there is a marked dislike to light and movement and any undue disturbance will increase the irritation.

The skin should receive careful attention, as these patients tend to get very emaciated and pressure sores are liable to occur. The patient should be sponged night and morning, as this tends to allay restlessness, and special attention paid to pressure points.

The bowels should be treated with enemata or aperients if necessary, and a careful watch should be kept for retention and incontinence of urine which are apt to occur.

The mouth, nose and eyes should be kept clean and moist, and all swabs used for this purpose burned, and the nurse's hands carefully cleansed afterwards, as the micro-organism is present in these secretions.

All " carriers " and " contacts " should have frequent swabs taken of their noses and throats, and should wash out the nose and throat frequently with some antiseptic. These cases are isolated until they are declared free from infection.

The feeding must be regular and gentle, rectal or nasal feeding often being ordered in the later stages.

The pressure is most marked at the base of the brain where the cranial nerves have their exit, so the nurse must report any signs of paralysis—*i.e.*, squint, ptosis, facial weakness or deafness. She must also report any signs of increasing intracranial pressure, such as decrease in pulse rate, slow stertorous breathing, increasing headache and drowsiness deepening into coma.

Lumbar puncture is an essential part of the medical treatment, and this lessens the convulsions and relieves the headache. Cold compresses and ice bags may be applied by the nurse to the head to afford some relief during the intervals.

In meningococcal meningitis there is some possibility of cure, but this is practically unknown in the tuberculous variety ; thus a nurse requires in both cases careful observation and gentleness so that in all cases the patient's symptoms can be relieved by appropriate measures and he can be made as comfortable as possible.

QUESTION FOR NEXT MONTH.

Describe the symptoms of enteric fever, the complications which may occur, and the nursing care.

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