

## OUR PRIZE COMPETITION.

MENTION THE INFECTIOUS DISEASES AFFECTING PRINCIPALLY THE CENTRAL NERVOUS SYSTEM, THEIR CHIEF CHARACTERISTICS, AND THE SPECIAL POINTS IN THEIR NURSING CARE.

We have pleasure in awarding the prize this month to Miss Ethel Stachey Laing, S.R.N., F.B.C.N., Mayday Road Hospital, Thornton Heath, Surrey.

### PRIZE PAPER.

The Infectious Fevers in which the Nervous System bears the brunt of the attack are:—

- (1) Acute Anterior Polio-myelitis or Infantile Paralysis.
- (2) Cerebro Spinal Meningitis or Spotted Fever.
- (3) Tetanus or Lock-jaw.
- (4) Epidemic Encephalitis otherwise known as Sleepy Sickness.

#### ACUTE ANTERIOR POLIO-MYELITIS

is caused by a "filter passing" organism found in the nasal secretions of infected persons, whether actually suffering from the disease or "Carriers."

The virus travels by the lymphatics to the anterior horn of the spinal cord affecting the lower efferent neurone.

The incubation period is variable, 1 to 14 days.

Prodromal symptoms include, restlessness or drowsiness, pyrexia, stiffness and pain in the limbs. These are soon followed by the most characteristic feature of the disease, the presence of a flaccid paralysis of irregular distribution, but it is very seldom that control of the bladder or rectal sphincters is lost.

Cases are recorded in which the patient goes to bed apparently well and wakes in the morning to find a limb paralysed. The affected muscles rapidly waste.

The Treatment consists of absolute rest in bed, diet as for any febrile condition, and isolation for from 4 to 8 weeks. All swabs used for cleansing the nose and throat must be burnt, and the nurse then thoroughly disinfects her hands.

Splints to the limbs relieve pain and help to lessen deformities. Tube feeding will be necessary in Bulbar cases, *i.e.*, where the pharyngeal muscles are involved.

When all muscular tenderness has ceased, massage and electricity are valuable and must be continued for from 6 to 12 months, in many cases longer. Later exercises and active voluntary movements must be encouraged.

Where deformities have occurred orthopædic operations may be required, such as tenotomy of shortened tendons, excision of portions of elongated tendons, and artificial ankylosis where flail joints exist.

#### CEREBRO-SPINAL MENINGITIS

is caused by the Meningo-coccus. Infection occurs through the nasal passages from the nasopharyngeal secretions of infected persons, "Carriers" again playing a very important part in the spread of this disease. Physical Exhaustion combined with over-crowding are important predisposing factors.

The chief symptoms of the fully developed disease are, vertigo, "cerebral vomiting," photophobia, squint, delirium, and opisthotonos, while in children convulsions are common. Various transient skin rashes may be observed, and the patient passes into the "Typhoid State."

The treatment must be carried out in a quiet, darkened room, with isolation. All nasal swabs immediately burnt and the hands of the nurse disinfected at once.

Anti-meningo-coccal serum is given into the spinal canal, the average dose being 20 to 30 cc. daily for 3 or 4 days, according to the severity of the disease. Lumbar puncture alone often relieves cerebral symptoms. The hair is best cut and an ice-bag applied to the head. Leeches applied to the neck may afford further relief. Incubation period 5 to 8 days. Contacts should be kept in quarantine for 10 days, and cultures taken from nose and throat. The patient is isolated for from 4 to 6 weeks.

#### TETANUS.

Tetanus is caused by the *Bacillus Tetani*, which gains entrance to the body through broken skin, *i.e.*, inoculation.

Wounds contaminated with soil are specially prone, as the bacillus normally inhabits the intestines of horses and other cattle. The bacilli remain and multiply in the wound, and the toxins travel by the motor nerves to the spinal cord taking on an average 10 to 14 days. This length of time constitutes the incubation period.

All patients with suspicious wounds should have a prophylactic injection intramuscularly of anti-tetanic serum, together with thorough cleansing of the wound.

The characteristic features of the disease consists of Tonic Muscular Spasms which commence with those of the jaw, spreading to the facial muscles producing the "sardonic grin," to the pharyngeal muscles causing dysphagia, and then extending downwards to the trunk and limbs. Hyper-pyrexia and opisthotonos occur, or the body may be arched laterally; pleurosthotonos. The spasms continue and may become clonic, excited by the slightest irritation or stimulus. In a severe case of the already present disease 1,500 to 3,000 units of anti-tetanic serum are given directly into the spinal canal and repeated 4 or 6 hourly. Inhalations of chloroform may be tried to lessen the intensity of the spasms.

The edges of the wound may have to be excised and the raw margins cauterised. All instruments must receive prolonged boiling as the bacillus produces spores which are amongst the most resistance to heat known.

Nasal feeding may be called for, and absolute quietness must be ensured.

#### EPIDEMIC ENCEPHALITIS.

The cause of Epidemic Encephalitis is unknown. Disease has been notifiable since 1919. Many cases give a history of influenza. The most striking symptom is the Drowsiness. Where the patient survives the acute stage, the chronic stage becomes a sequence of serious after effects, including mental and moral weakening with loss of self control, particularly in children, which latter fact is having to be carefully considered by the educational authorities of the country.

#### HONOURABLE MENTION.

The following competitor receives Honourable Mention: Miss Gladys M. Poskitt, S.R.N., M.B.C.N.

#### QUESTION FOR NEXT MONTH.

What is Malnutrition? Among what classes is it principally prevalent? What are the causes and how should they be combated?

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