

OUR PRIZE COMPETITION.

WHAT DO YOU KNOW OF SMALLPOX, THE METHOD OF INFECTION, AND ITS TREATMENT?

We have pleasure in awarding the prize this month to Miss Maria Dugdale, S.R.N., Schofield Road, Rawten-stall, Lancs.

PRIZE PAPER.

Smallpox is a classical disease, it was known to the Chinese, centuries before the birth of Christ. The Saracens introduced it into Arabia about the seventh century, but it was not introduced into England until the fifteenth century.

It is an acute infectious disease characterised by a peculiar eruption, and having certain well-defined symptoms.

Before the discovery of vaccination, smallpox was an extremely fatal disease, but where vaccination is enforced by law, the disease, if it does occur, assumes a modified form which is rarely fatal.

METHOD OF INFECTION.

The disease may be spread by:—(1) Direct contact with the patient; (2) Mediate infection, as by clothing or other infected articles; (3) Aerial convection for a distance not exceeding half a mile.

Owing to the fact that the disease is conveyed by the air, smallpox hospitals are built at a distance from any other buildings, so that isolation is maintained in a further sense than is necessary when dealing with other specific fevers.

The onset of the disease is insidious, the first symptoms appearing about 12 days after exposure to infection.

The symptoms are:—(1) Headache, often described as "splitting"; (2) Rise of temperature; (3) Pain in lumbar region; (4) Pain in stomach; (5) General pain; (6) Vomiting, often occurs in children; (7) Nervous symptoms such as dizziness, staggering, prostration and incoherent speech.

There is often a prodromal rash, which may be just an erythema, somewhat resembling scarlet fever or measles, but in the more severe forms of the disease the initial rash is often hæmorrhagic, or petechial.

These hæmorrhagic spots may vary in colour, sometimes resembling flea bites, but in the severe types of the disease they may be indigo, purple or black. This rash usually occurs on the first or second day. The temperature rises to about 105° F., and on the third day, the eruption appears.

The first signs of the eruption are small, red spots (erythematous) which within a few days become slightly raised, feeling hard and shotty under the fingers. Later, these spots become filled with a clear, watery fluid and thus the papule becomes a vesicle. The fluid gradually becomes cloudy and then changes into pus, the pustule bursts and the fluid escapes on to the skin, but it afterwards dries up, forming a hard brown scab, which finally separates, leaving a scar. The parts of the body which are most exposed to the air are the parts which suffer most, the eruption is thickest on the face, where it first appears. Spreading over the head and neck, to the hands and arms, which are often encrusted, the eruption next appears on the trunk, then on the legs and feet.

The eruption appears so quickly that it is possible to determine the severity of the attack by the third day.

The mucous surfaces are attacked and the mouth and throat are often so sore that swallowing is difficult and painful. There are four types of smallpox:—(1) Discreet; (2) Confluent; (3) Hæmorrhagic; (4) Modified.

DISCREET SMALLPOX.

The temperature falls after the eruption appears, but may rise again between the vesicular and pustular stages. There is often marked prostration (typhoid state), and may be delirium. The fauces and larynx may be attacked and tracheotomy is sometimes necessary. Eye trouble may occur, and great care is necessary when attending to the eyes, indeed, the patient is so feeble that great care and gentleness are always necessary.

CONFLUENT SMALLPOX.

The tendency is for the pocks to run into each other, and the disease takes a more virulent form. There may be sloughing of the fauces and all the complications are more severe. The scabs take longer to separate, as they are more encrusted.

HÆMORRHAGIC SMALLPOX.

A most fatal form of the disease, the prodromal rash often resembles erysipelas. There may be epistaxis, hæmaturia, hæmoptysis, and hæmatemesis. The temperature is usually low.

MODIFIED SMALLPOX (VARIOLOID).

Sometimes attacks people who have been vaccinated, the symptoms are slight, and the whole course of the disease is modified.

COMPLICATIONS.

One of the worst features about smallpox is the variety and severity of the complications which often ensue, and there is only space to enumerate them:—

(1) Erysipelas, (2) Subcutaneous abscesses, (3) Bronchitis, (4) Broncho-pneumonia, (5) Corneal ulcer, (6) Loss of sight, (7) Insidious eye trouble, (8) Septicæmia, (9) Otitis Media.

TREATMENT.

The patient is put to bed in a large ward. The windows are kept well open.

Diet must be light and nourishing.

The mouth and throat will need constant attention in order to keep them clean.

All symptoms are treated as they arise.

Warm baths are necessary, care being taken to avoid undue exertion and strain.

Special precautions to prevent infection are necessary.

All discharges, scabs, &c., are infectious, and must be burnt.

Zinc powder, boric powder or tincture of iodine may be used to assist in drying the scabs.

HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss A. F. Worcester, R.F.N., Miss M. W. Comer, S.R.N., Miss P. Thomson.

QUESTION FOR NEXT MONTH.

How would you know that a patient was suffering from an overdose of (a) Arsenic, (b) Opium, (c) Salicylate of Soda, (d) Insulin, and what would you do pending the arrival of a medical practitioner?

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