

The Medical Officer of Health, Auckland, reports:—

“The warmer climate in the north certainly has not resulted in any increase in susceptibility to the disease; indeed, during the warmer months—January, February, and March—with an average maximum temperature of 69·9° F. only 17 cases occurred, while during April, May, and June, with an average maximum temperature of 61·5° F., the peak period occurred with 72 cases.”

CLINICAL PARTICULARS.

No attempt has been made to include the clinical features of the epidemic or the various diagnostic tests, such as the cell count, colloidal gold test or the Pandy test for globulin. These aspects of the outbreak will no doubt be dealt with elsewhere. The following short notes on treatment as carried out at the Dunedin Hospital and included in the report of the Medical Officer of Health may be of interest:—

TREATMENT.

Physio-therapy.—The distinctive feature in the treatment used during the epidemic in the Dunedin Hospital was the immediate commencement of physio-therapy.

Splinting.—Splints were applied as soon as paralysis appeared. The light-weight metal type was principally used. These were well perforated for ventilation and lined with gamgee tissue, which was changed twice daily as the sweating was excessive.

Plaster only was used in emergency, or for hand splints, where it was difficult to obtain a suitable position with metal. Positions were chosen which gave relaxation of the paralysed groups, or an intermediate position when two opposing groups were affected.

No extreme positions were used, especially so in the case of the knee, where 10° flexion was always maintained.

In cases where there was paralysis of both deltoids some difficulty was found in preventing the patient slipping away from his shoulder, with a resulting difficulty in elevating the outer extremities of the clavicles. This was particularly the case when the patient had any degree of respiratory affection necessitating his being propped up.

Light frames were used for the spinal muscles and fracture boards placed under the mattresses.

Movement.—This was begun at once and not left, as hitherto, until the acute stage was recovered from.

The range of movement was carefully maintained, great care being taken at all times to guard against stretching of ligaments, especially of the knee and spine. Begun at once, movements were usually painless and any subsequent adaptive shortening prevented.

This contraction of splinted and unexercised muscles has been a great and persisting difficulty in cases which were sent into hospital from country districts where no movements were given during the isolation period.

As well as careful passive movements, the patient was encouraged to perform active movements and to concentrate on the paralysed muscle or muscles with the object of maintaining motor memory.

Weak groups of muscles were trained by the sling method, more individual groups on cardboard.

General exercise was given in a hot swimming-bath, patients being put into it early in treatment. Some special training was given in the water, but it was used principally to allow freedom of movement for all muscles. It never seemed to have any undesirable effect on the weakened muscles and had most beneficial general results.

Heat.—Infra-red and short-wave therapy were tried on those patients who had extreme spasm of the vertebral muscles and resultant discomfort. However, no relief or marked improvement could be claimed, although more of the patients felt easier during the actual application.

Electricity.—Interrupted Galvanism and Faradism were not used. It was thought more satisfactory to concentrate on muscle training.

Ambulatory Splints.—The usual types were supplied when the patient's condition was satisfactory.

SUMMARY.

New Zealand has experienced three major epidemics (1916, 1925, 1937) and four minor ones (1894, 1914, 1921, 1932).

A recognizable epidemic is preceded by a wave of unrecognized pyrexias and vague symptoms, and is also accompanied by such cases.

Closing of all schools in a district is probably a valuable protective measure, if other gatherings of children are prohibited at the same time.

The seasonal incidence in New Zealand is usually late summer, with a peak in March, and continuing well into the winter. The curve of this epidemic shows a departure from the normal.

The morbidity was for all cases notified 5·7 per 10,000 of population, and for cases with paralysis, 4·1 per 10,000.

The age-incidence was higher in this epidemic than in the last one (1925)—80 per cent. of notified cases in 1937 being under fifteen years of age, compared with 89 per cent. in 1925.

The age-incidence is slightly lower in urban areas than in rural.

The case-mortality was 5·1 per cent. of all notified cases and 7 per cent. of paralytic cases.

The closing of schools, the prohibition of gatherings of children and the parental shepherding appear to have appreciably checked the spread of this epidemic.