new and higher civilization in which justice to women must form a prominent part.

The spiritual battles in which women have been engaged for so many years must also end in a decisive victory, which will give to all qualified women political enfranchisement; to all qualified Nurses professional enfranchisement; to all working women—including Nurses—just and adequate remuneration. For all men and women — *Liberty* — *Fraternity* — *Equality*. These are rights, not favours.

OUR PRIZE COMPETITION.

WHAT DO YOU KNOW OF ACUTE POLIOMYELITIS, AND THE NURSING CARE NECESSARY IN CASES OF THIS DISEASE?

We have pleasure in awarding the prize this week to Miss Dorothy Humphreys, St. Bartholomew's Hospital, London, E.C.

PRIZE PAPER.

Acute Poliomyelitis is synonymous with acute anterior poliomyelitis, commonly termed infantile paralysis, because it occurs most frequently in children under ten years of age, though it may be seen in adults. In this country it usually occurs in single cases, but the epidemic form, at present prevalent in New York, is known, and it was a notifiable disease in 1911.

Causes.—These are at present obscure. It is said to be caused by a germ, which, however, has not yet been isolated; the methods of infection are therefore unknown. Flies are suggested, but not proved, disseminators of the disease. Its onset is encouraged by such indirect causes as exposure or febrile conditions.

Affection.—The inflammation attacks the anterior cornua of the grey matter of the spinal cord. The anterior cornua give rise to the anterior roots of the spinal nerves, consisting of motor fibres, and hence controlling movement. The inflammatory process affects various regions of the anterior cornua, either in patches or uniformly, and causes them to shrink in proportion; the motor nerves of the spinal cord are secondarily involved at a comparatively late stage of the disease. They undergo atrophy, and the muscles implicated shrink in varying degrees, usually shrinking abnormally, occasionally retaining their normal size and shape; sometimes, owing to accumulation of adipose tissue (fatty degeneration), they present an increase of bulk.

Symptoms.—These vary according to the position and extent of the lesion. The onset is nearly always acute, with fever and pains in various parts of the body resembling rheumatism. Occasionally, there are convulsions, coma, or other cerebral symptoms. This febrile attack may vary from a few hours to several days. The paralytic symptoms develop quickly and unexpectedly. The child is often found paralysed on waking from sleep, the paralysis attacking one or more limbs or certain groups of muscles. Paralysis develops rapidly, so that at the end of a day or two it has usually attained its maximum degree and extent; it may, however, clear up completely or partially. The extent varies; most commonly, groups of muscles belonging to a limb or limbs are affected: there may be paralysis of one side, or of both legs, or of both arms and legs, of one limb only, and so on. The muscles affected waste, their antagonists contract and shorten, deforming the limb. The disease is marked from the first by the flaccidity of affected muscles, the abolition or impairment of reflex excitability, and particularly of faradic contractility in the affected muscles; the reactions of degeneration follow (*i.e.*, the muscles react to the galvanic current by a sluggish but pronounced contraction; they do *not* respond to the faradic. There is a remarkable diminution of temperature in the affected limb. Sensation is not impaired, the posterior cornua not being affected. Cutaneous hyperæsthesia is sometimes present early, but after the fever dies down there is no pain. The bladder and rectum are not affected.

Stages.—The disease may be divided roughly into three stages. The febrile state, followed by impaired muscular action, is the first. After a few months, the second stage begins; some improvement takes place, and muscles not permanently damaged recover their normal reflexes and power. The third stage begins after about a year, when wasting and deformity set in. Talipes equinus is one of the commonest forms.

Treatment.—The febrile condition must be nursed on the lines common to all acute fevers, ice sometimes being applied to the spine. Later, the chief attention must be paid to the affected area to prevent or correct deformity. It is most essential to keep up the nutrition of the limb by warmth and exercise, and so improve the defective circulation. The limb must be warmly wrapped up, and if necessary adjusted in splints or sandbags to correct the position. Massage, remedial exercises, and electrical treatments should be started at the earliest opportunity; they are most important.

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