

bedside. Then the facial tremulousness was quite in evidence, and would often terminate in peculiar spasmodic grins. He was able to move his eyes in all directions, but his pupils were still irregular, though responsive to light. He had considerable difficulty in articulation, and when requested to protrude his tongue did so in a jerky fashion, which effort brought out quite markedly jactations of his arms and facial muscles. When asked to take hold of examiner's hand, he obeyed the command, but markedly gross ataxic, jerky motions ensued, which seemed to quickly increase in rapidity, and, after a few moments suddenly subside. Otherwise, the position of his arms was in extension, accompanied with frequent jerkings, including some action of the pronators and extensors of the wrists and twitchings of the fingers. The lower limbs were tensely extended, and there were occasional quick hyper-extensions, with marked dorsal flexion of the ankles. His tendon reflexes were all markedly increased, the patellar reflexes being spastic. No Babinski sign elicited. At all times, he reacted promptly to pin pricks. During the last four or five days he was unable to articulate or swallow liquids, and had quite a degree of rigidity of the neck muscles. Respirations became much increased. Pulse became rapid, and muscular twitchings continued until death, when his temperature was 100.2° . On admission, lumbar puncture showed 27 white cells to the cm.

Autopsy seven hours after death. Marked emaciation. Pericardium adherent; aorta atheromatous; lungs showed focal pneumonic consolidations; recent as well as old pleuritic adhesions; congestion of the parenchymatous organs. Brain weighed 1345 grammes. Pia gray; somewhat injected; slightly, but diffusely thickened vessels and negative cortex. Microscopically, there was advanced axonal alteration of the Betz cells, and in a few of the larger pyramids, which showed poor preservation of the peripheral stainable bodies.

Case No. 6069.

Admitted March 19th, 1907.

This woman, aged 55, who had an insane uncle, was always considered eccentric and somewhat defective. At the age of 35 began to show mental traits, concerning which but little is known. She had various persecutory ideas, talked much about spirits, dressed in peculiar fashion, and was in an institution for a few years, where, it is said, she was hallucinated. She was discharged improved, and got along well until the early part of 1907, when she became irritable, threatening, talked much about voices, and expressed senseless ideas; wandered about in cold weather improperly clad.

On admission, she was very poorly nourished, and there was harsh breathing over the entire right lung. She was disinclined to talk, became irritable. Her recollections were unreliable and she made vague references to persecutions by neighbours, and also to hearing God's voice. A few days after admission, was given an anæsthetic and two toes amputated from her right foot because of former frost bites. She continued in bed, and in the following month had considerable diarrhoea, cough and expectoration; seemed much prostrated, unable to walk and had a tendency to lean to one side. Two months after entry began to talk in a delirious fashion, showed some muscular tension of her arms and legs with occasional twitchings. There gradually developed marked flexions of the arms and legs, particularly of the latter. The jerkings of her arms became more gross and in greater frequency, and were especially noticeable when she was approached or disturbed. They were confined mostly to the flexor group of muscles, although the extensors, abductors and finer muscles of the hands shared in the exhibition. She eventually developed, also, jactations of the jaw and facial muscles, had retraction of the head, difficulty of swallowing and articulation, and became increasingly stuporous, although, at times, was able to recognize her brother to within a day or so of her death. She was conscious just before death, turned her eyes to the nurse, and feeble jactations, especially of her face, were then noticed.

The duration of her hospital life was three months and ten days, and approximately the duration of the characteristic neuritic symptoms was about three weeks. Throughout the course of her attack her temperature had not been higher than 100° , and the respirations at the last reached 40 per minute.