

On the following day electrical treatment was given to the extremities, and this was more or less regularly applied for three weeks. Ten days after the operation the patient began to complain of subjective sensations in his extremities. On the 11th day he was aware of the catheter being passed, and a few days later he was able to tell the orderly that he felt faeces passing through the rectum. At this time the knee jerks reappeared, and a week later a well-marked ankle and rectus clonus were present. About the same time faradic irritability to strong current returned in his muscles, the galvanic responses were normal. December 10th, the patient complained of involuntary spasms in the lower extremities. From that time very little progress was made in his condition.

At the present time the patient still suffers from complete loss of motor power, sensation having but slightly returned. Rectal and vesical retention is still present. He is able to sit up in bed, and his general health is markedly improved. Had electrical treatment and massage been carried out, I have no doubt that to-day he would have had a return of motor power, but for many reasons this could not be done.

The history of the course of events in the case just related is interesting in that it resembles very closely the experiment related in the first part of this lecture, namely, pressure being applied to the sciatic nerve of a dog. Here we have first of all a motor and sensory paralysis due to the pressure inhibiting to a large extent the motor and sensory impulses from passing either up or down. The reflexes were increased, due to the inhibitory influence of the upper motor neurone being interfered with. Later on, as the pressure was still being applied, all impulses coming down or going to the brain were completely cut off, just as we would have if the cord was cut through. This was shown, clinically, by the flaccid motor and sensory paralysis. Still later on, isolation alteration had taken place in the cells of the lower motor neurones in the anterior horns below, the seat of the pressure, with the result that we got marked loss of tone and typical reaction of degeneration to the faradic and galvanic battery. The removal of the pressure was followed within a week by the return of the reflexes, then a spastic condition, and later on by the normal response of the muscles to electrical current. Though no discontinuity or severance of the cord was found, no doubt a considerable molecular change and separation had taken place in the axones and myelin sheaths of the neurones of the spinal cord. In the experiment with the sciatic nerve we found sensation was the first to return, later, motion. Now, had the muscles in the lower extremities been kept in good condition by electrical treatment and massage, till such time as regeneration had taken place in