SPONTANEOUS REDUCTION OF A DISLOCATION OF THE CERVICAL VERTEBRAE.

BY

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On April 25th, 1912, I was called to Ulverston to see a patient who was under the care of Dr. Anderson of that place. As the call was by telephone, I learnt that there was a possible fracture of the spine, that Dr. Thurstan Holland had been to Ulverston the previous day and taken a skiagram of the injured spine, and I was to go prepared to operate if necessary to relieve any pressure on the cord. I therefore went first to Liverpool to see the x-ray plate, in which it could be seen that there was an increased interval between the third and fourth cervical vertebrae and that the lower edge of the body of the third was pushed forward over the upper edge of the body of the fourth; this edge was less sharp than below.

On reaching Ulverston I learnt that on April 21st the patient, aged about 65, fell from a tree. As he was standing on a horizontal part of the trunk his feet slipped from under him, and he fell on his back and slipped down; possibly while thus falling a projecting piece of wood struck his spine. As he lay upon the ground he was perfectly conscious and had no pain, but had no power in his arms and legs; breathing was gasping, and he was conscious of having to force it. After a while there was some pain across the back, passing from the shoulder blade up to the head. There was no vomiting and no irregularity of the organic reflexes.

That same night there was a slight movement of the legs which the following morning was increased. On April 24th an enema was given, and the sphincter control was perfect. There was no spontaneous pain, but on movement of the body there was pain at the back of the neck, and he was conscious of a creaking sensation, but this was not detected by others or by the doctor who examined him. There was an inability to turn in bed, and there was a "feeling of a band" felt across the liver on the evening of April 21st. This disappeared and occurred higher up, and became, in the words of the patient, "like a cane stretched round the chest obliquely, passing below the left armpit and over the right shoulder." On April 25th the band felt a little lower and wider, passing over the heart, and seeming to cause embarrassment on breathing.

I found the patient sitting in a chair, apparently not suffering, and ready to converse intelligently about the situation. As he sat he was able to move his legs slightly, but he could not move his arms. Movements of the head and back seemed a little restricted; being utterly helpless to rise or help himself, he was lifted on to the bed.

1. LEGS.

(a) *Sensory Functions.*—Babinski's sign was absent from both feet. The right foot was hypersensitive, and pin-pricks were felt more on the right foot than on the left. He described the same prick on each foot as "sharp on the right foot and blunt on the left." A scratch or a pinch showed the same from the knee to the ankle. The right leg was rather duller than the left to the various forms of sensibility.

(b) *Motor Functions.*—The power to move the right leg was delayed and sluggish, though only very slightly limited in extent, while the left seemed normal. The knee-jerks were normal on both.

2. ARMS.

(a) *Sensory Functions.*—The hands appeared a little swollen, and in both arms there was a greater sensation on the radial than on the ulnar side, while the median area was indefinite. There were no patches of lost sensation.

(b) *Motor Functions.*—Flexion and extension, feeble in the fingers and wrist, were absent from the arm and forearm. In the attempt to lift the forearm the pectorals and trapezii contracted; supination and pronation were feebly present on both forearms. The grip and motor power of the hand was less on the left than on the right, and reflexes were present.

3. THE TRUNK.

Nothing obvious was to be noticed. The superficial reflexes were absent on the left, present on the right. Inspiration was full and painless. Sensibility was present all over, but was rather less on the right side; the region of the band above referred to, just below the left clavicle, showed an area of markedly lessened sensibility. The neck behind was red from local application, the skin was coarse, and when pinched between the fingers, slightly nodular. There was no abrasion, but there was slight tenderness over the cervical vertebrae, while the rest of the spine might be handled with impunity. No crepitus or abnormal formation could be detected.

The pupils were active to both light and accommodation, but the right was rather sluggish. The heart sounds were normal, the mental temperament was vigorous. The respiratory system appeared normal.

The important locating fact was that the arms were hypersensitive on their radial aspects, which is the area supplied from the fifth cervical root.

Amongst the literature on the subject which I read up in the train *en route*, Horsley's dictum from the *Clinical Journal* guided my action. "If the lesion is acute and in the cervical region, then certainly wait. As regards the dorsal region, better to wait a little. As regards the lumbar region, I do not think you want to wait to operate."

The result of masterly inactivity was that in two months the patient walked into my consulting-room unaided and shook hands, but the finer movements were wanting, and he could not dress himself. On October 13th he was back at his office in Liverpool, could write well, but still was unable to button his collar.

Now, in June, 1913, fifteen months after the accident, he is able to carry on his work, but still has numbness in his finger-tips which hinders the finer movements being performed, and occasional twinges in the muscles of the neck.

A NOTE ON LOCAL ANAESTHESIA.

BY

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THE application of local anaesthetics is taking a very important place in the surgery of the present day, and is likely to replace the use of general anaesthesia in all minor and in many major operations. A field of outpatient surgery has thus been opened up which English hospitals have been somewhat slow to recognize, whilst in private practice the opportunities of the general practitioner have been greatly increased. The latter can now carry out in his consulting-room operations which have hitherto involved all the paraphernalia of general narcosis, and the only assistance required may be given by the patient himself.

The equipment required consists of a first-class syringe with fine needles of varying length. A Record syringe of 5 or 10 c.cm. capacity will answer all requirements. A few long blunt-pointed needles are useful for extensive infiltration.

The drugs chiefly used are cocaine, eucaine, novocain, and adrenalin. These all oxidize rapidly if exposed to the air in solution. All solutions should therefore be made up immediately before use, and when this is done it is possible to be certain that the solution is both active and sterile.

Local anaesthesia may be produced by four distinct methods: (1) Local application; (2) local infiltration; (3) nerve blocking—"regional" anaesthesia; (4) venous infiltration.

1. Local Application.

This is only used in relation to certain mucous membranes and raw surfaces. Its chief applications are in the nose, eye, and urethra. The nose may be plugged with strips of gauze soaked in a 20 per cent. solution of cocaine to which a few drops of 1 in 1,000 adrenalin have been added. In the eye 1 per cent. to 4 per cent. solutions may be used. In the urethra cocaine should only be used in 1 per cent. solution, as absorption is rapid, and toxic symptoms may be marked. This is the great disadvantage