Open Reduction of Fracture-Dislocation of Fourth and Fifth Lumbar Vertebrae.

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THIS patient, aged 29 years, was a miner. He was injured at work on October 8th when coal fell on his back while he was in a flexed position. He was taken to a casualty department near to his work and was admitted from there to hospital.

He was in fairly good condition on admission, but slightly shocked. He was found to have several grazed areas and tenderness over lumbar and sacral spines. X-rays showed fracture-dislocation of the fourth and fifth lumbar vertebrae. No other abnormality was found.

On admission to the ward he was placed in a bed with fracture board and was treated for shock. All usual nursing care was given, but he was moved as little as possible and never by two people alone. The following morning a course of penicillin was commenced, 120,000 units being given six-hourly. He was in fairly good condition and was not complaining of undue pain, but abnormal movement in his lumbar spine was felt when he was turned. It was decided to perform an open reduction the following day, October 10th.

The patient was brought into the anaesthetic room lying in his bed on his back. A general anaesthetic was administered to him in this position.

He was then taken into the theatre and placed on the table, lying prone on his face with his hands forward. The towels were placed in position. A medial incision about 4 in. long was made over the area of injury. The tissues were dissected to expose the vertebral column, and were covered with skin towels, kept in position by Michel clips. Diathermy was used to small vessels. A rectal self-retaining retractor was used to keep the tissues apart and so allow for further examination.

The vertebral column was exposed and the injury was examined and compared with the X-ray plates. One spinous process was found to have been fractured off and the bones crushed together and slightly depressed.

It was decided to manipulate slightly to remove damaged pieces of bone and to graft the area with bone from the right tibia. Slight manipulation by internal rotation of the right leg brought the bones into better position. Some of the damaged bone was removed. The patient was dorsi-flexed and the dislocation was then reduced. Remaining fragments were removed and the tissues trimmed and retracted a little further. Measurements were taken in preparation for removing the graft.

A Biers' tourniquet was applied just below the knee and remained in position until the whole operation was complete. The leg was then dorsi-flexed and kept in that position. A straight mid-line incision was made down the shin. A key-hole graft was taken from the tibia. This consisted of a rectangular piece of bone approximately 2 in. by 1½ in. with a small rectangular piece of bone cut from the centre. This graft was removed by means of an electric drill. After its removal the wound was closed and sutured with nylon and a dry dressing was applied.

The graft was then tried over the injury. The spinous processes were trimmed slightly to fit. The graft was then placed over the area. Slight manipulation was necessary. The patient was returned to prone position and one leg slightly rotated. The graft then slipped into position over the processes. The small piece of graft was divided and used to wedge the bones so that movement was finally impossible at those joints.

The wound was then closed with fine catgut, and silk sutures were used externally. A dry dressing was applied and fixed with strapping.

The patient was lifted on to his bed and placed flat on his back. His condition was satisfactory and prognosis good.

On October 17th, one week later, the patient was improving satisfactorily. The penicillin is still being continued and sulphatriad gm. 1½ has been administered four-hourly for the last four days to counteract a slight infection of the urinary tract. This is now practically normal.

On October 21st, although general progress was satisfactory, the patient still had a retention of urine. All treatments had been attempted repeatedly without effect. The penicillin and sulphatriad were by now discontinued and he was having gentle exercises.

On November 1st the patient was transferred to the Paraplegic Department. Here special care and treatment were used and now, two weeks later, the patient is almost cured. He will be discharged very soon when he is quite better. Exercises will be continued and gradually he will begin to work again. At first only light work for short times will be given. Then gradually he will be able to continue normally.

Nine m.p.h. Ambulance Car for the Mine.

Built by Colliery Staff.

AN ambulance car which can travel through a pit at nine miles an hour without discomfort to the patient is to be introduced at Easington Colliery, Durham.

It was designed by Mr. Thomas Hopkins, the resident manager, and was built by the colliery engineering staff.

Tests have revealed complete comfort and warmth for the patient, and the car has been so designed that, if necessary, a sick or injured miner need not be moved from the stretcher from the moment he leaves his working place in the pit till he reaches hospital.

It is a simple and compact device. The stretcher slides along the runners of a floating platform which is slung on spiral springs and jolting is practically nil. The car, which is attached to the man-riding set, can be drawn 2½ miles from the inbye terminal to the shaft and loaded into the cage.

When the cage reaches the surface at ground level it is halted. The colliery ambulance can be backed up to the shaft in readiness, and the stretcher can be slid from the car directly into the ambulance.

We congratulate Mr. Hopkins and the colliery engineers on this brilliant feat designed, as it is, to relieve their colleagues in the pits from what might otherwise have been added and grievous pain.

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