Motocross accident

Motocross is a form of off-road motorcycle racing held on enclosed off-road circuits. The sport evolved from motorcycle trials competitions held in the United Kingdom.

Motocross is a physically demanding sport held in all-weather conditions.

They have been gaining popularity among children and adolescents, raising concerns for increased risk of concussions in participating youth.

Motocross is a popular sport and at times has unacceptable risks of injury in organised competitions, especially with regards to paediatric injuries. Better course design, restrictions on participant age and limitations in vehicle speeds may help reduce the number of severe injuries. These events can also generate a sudden trauma burden to local hospital facilities with knock on effects on waiting times for theatre and potentially compromising not only treatment of the injured participants but also the treatment of other patients in the hospital. Cooperation with event organisers may enable extra staff and theatre time to be arranged in advance but at increased cost to the local health services [1)].

Brachial plexus injury

A 25-year-old man sustained a right-sided brachial plexus injury from a high-velocity motocross accident. Physical examination and electromyography were consistent with a pan-brachial plexopathy with no evidence of axonal continuity. The patient underwent a spinal accessory nerve to suprascapular nerve transfer and an intercostal nerve to musculocutaneous nerve transfer with interpositional sural nerve grafts. He recovered MRC 4/5 elbow flexion and MRC 2/5 shoulder abduction and external rotation. Twenty-two months post-injury the patient displayed a flicker of flexion of his flexor pollicis longus and flexor digitorum profundus to his index finger - he went on to recover a functional pinch. Thirty-six months post-injury the patient displayed a flicker of contraction in brachioradialis with motor unit potentials on electromyography. This case demonstrates that some patients may have capacity for functional recovery after prolonged denervation and highlights the potential impact of anatomical anomalies in the assessment and treatment of peripheral nerve injuries [2)].

Traumatic spinal cord injury

A 25-year-old man had a T11-T12 fracture dislocation sustained in a motocross accident that resulted

in a T11 American Spinal Injury Association Impairment Scale (ASIA) grade A traumatic spinal cord injury. He was treated with acute surgical decompression and spinal fixation with fusion, and enrolled in the spinal scaffold study. A 2 × 10 mm bioresorbable scaffold was placed in the spinal cord parenchyma at T12. The scaffold was implanted directly into the traumatic cavity within the spinal cord through a dorsal root entry zone myelotomy at the caudal extent of the contused area. By 3 months, his neurological examination improved to an L1 AIS grade C incomplete injury. At 6-month postoperative follow-up, there were no procedural complications or apparent safety issues related to the scaffold implantation.

Although longer-term follow-up and investigation are required, this case demonstrates that a polymer scaffold can be safely implanted into an acutely contused spinal cord. This is the first human surgical implantation, and future outcomes of other patients in this clinical trial will better elucidate the safety and possible efficacy profile of the scaffold [3].

Concussion

see Concussion in motocross accident

Spine degenerative changes

Increased degenerative changes in the cervical and thoracic spine were identified in adolescent motocross racers compared with age-matched controls. The long-term consequences of these changes are unknown; however, athletes and parents should be counseled accordingly about participation in motocross activities [4].

References

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