Spinal cord injury

Oral communications

CO06-001-e
Medico-surgical management of lower extremity fractures in patients with spinal cord injury: Assessment and advice based on a 10-year retrospective study carried out in a university hospital
A. Fouasson-Chailloux (Dr) a,*, M. Dauty (Dr) a, M. Le Fort (Dr) b, C. Dubois (Dr) b, F. Gouin (Prof) b, Y. Maugars (Prof) b, B. Perrouin-Verbe (Prof) b

a CHU de Nantes, hôpital St-Jacques, MPR locomotrice, Nantes cedex 1, France
b CHU de Nantes, Hôpital Drieu, clinique chirurgicale et orthopédique
c CHU de Nantes, Hôpital Drieu, rhumatologie
Corresponding author.
E-mail address: albanhotep@hotmail.fr (A. Fouasson-hailloux)

Objectives To evaluate the management of lower extremity fractures in patients with spinal cord injury cared for in a referent university center.

Patients and method Retrospective monocentric study carried out in patients with spinal cord injury cared for lower extremity fractures at a University Hospital of Nantes.

Results In 10 years, 57 fracture events responsible for 61 fractures in 41 patients were managed. Average patient age was 50 years old (22–83), 73.3% of patients were AIS A. The median time to onset of the 1st fracture was 14.2 years. The most common sites were distal femur (27.9%), distal (21.3%) and proximal tibia (16.4%). Fracture mechanism was wheelchair fall in 50% of cases. Surgery was carried out for 65.6% of the fractures. At least one medico-surgical complication occurred after 25% of surgical treatments and 57.1% of orthopedic treatments. Forty-two percent of the fracture events were followed by hospitalization. Douze patients had dual-energy X-ray absorptiometry performed at the lumbar spine and femoral necks. The average bone mineral density was 0.566 g/cm² at the right femoral neck (T-score: –3.3; Z-score: –2.6), 0.574 g/cm² at the left one (T-score: –3.4; Z-score: –2.8) and 1.07 g/cm² at the lumbar spine (T-score: –0.38; Z-score: –0.21). Nine patients were treated with bisphosphonate.

Discussion Lower extremity fractures occur close to the knee for low traumas. Surgery seems to provide fewer complications. For sub-lesional bone loss screening, a low bone mineral density is predictive of fractures. The best site of measurement is the distal femur because of reliability and reproducibility. The measurement on the lumbar spine is not recommended. Bisphosphonates have never shown efficacy for the reduction of the number of fractures but allow an increase of bone mineral density.

Keywords Lower extremity fractures; Spinal cord injury; Osteoporosis; Dual-energy X-ray; Absorptiometry; Bisphosphonate

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Lipofilling (fat grafting) in the prevention of ischial tuberosity pressure ulcers in patients with spinal cord injury
C. Opsomer (Dr) a,*, P. Fontet (Dr) b, M. Simon a, T. Ducrocq a, J.G. Previnaire (Dr) a

a Département médullaire, Centre Calvé, Fondation Hopale, Berck-Sur-Mer, France
b Service de chirurgie, Institut Calvé, Fondation Hopale
Corresponding author.
E-mail address: previnjg@hopale.com (C. Opsomer)

Purpose To evaluate the efficacy of lipofilling technique (fat grafting) in the prevention of ischial tuberosity pressure ulcers in patients with spinal cord injury.

Materials and methods Eleven consecutive patients presenting with chronic spinal cord injury (SCI) benefited from bilateral ischial lipofilling, using the Coleman technique. There were 9 paraplegic and 2 tetraplegic patients, 2 men and 9 women. Mean time since SCI was 22 years (5–39 years). They all had a history of ischial tuberosity pressure ulcer surgery (unilateral or bilateral). All patients attended a seating clinic with pressure mapping, before surgery and at follow-up.

Results Autologous fat was taken from the abdomen, thighs or hips through liposuction. The removed fat was then concentrated and grafted in tiny amounts within the interstitial tissues underneath the ischial tuberosities. The procedure was performed under a local or general anaesthetic in one session. There were no significant side-effects or complications.

Mean follow-up time was 13 months (1–24 months). No patient developed any pressure ulcers during this period. Nine patients showed persistent ischial tuberosity fat issue remodelling. Pressure mapping found improvement in the seated buttock pressure distribution in most of them. Two patients showed significant fat wasting on clinical assessment.