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
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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). Onze 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
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Purpose To evaluate the efficacy of lipofilling technique (fat grafting) in the prevention of ischial tuberosity pressure ulcers.

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 women for 9 men. Mean time since SCI was 22 years (5–39 years). They all had a history of ischial tuberostity 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 tuberostity 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.
Discussion and conclusion Lipomodelling and lipofilling have become widely applied in reconstruction following breast cancer surgery, or cosmetic augmentation. To our knowledge, this is the first time this technique has been used in the prevention of pressure ulcers in patients with SCI, and our early results are very encouraging.

Keywords Spinal cord injury; Pressure sore; Lipo-filling; Prevention; Seating clinic

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

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CO06-004-e Therapeutic strategy for taking care of perineal pressure ulcers in spinal cord injury (SCI) patients

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Objective The perineal pressure ulcer is, from the outset, a serious bedsore as it exposes the patient to the risk of fistula in addition to the regular complications associated with bedsores. Treatments reported in the literature couple recovery by reconstructions have helped to heal the bedsores or enabled the reuse of urethra for self-catheterization. After cystoprostatectomy and Bricker, only 2 out of 15 patients relapsed, given a follow-up period between 1 and 6 years.

Discussion Like any pressure ulcer, the treatment of perineal pressure ulcer requires a careful evaluation of the circumstances of occurrence and risk factors (history of ischiectomy, proximal hip removal, prolonged indwelling catheter), and a neuroperineal (bladder balance and voiding mode), skin, nutrition, neuro-orthopedic, seat, and socio-psychological assessment. In the presence of urethrococuteous fistula, a urinary diversion seems absolutely necessary: usually a non-continent bypass with cystoprostatectomy and Bricker which remains surgically heavy and may negatively affects self-image exceptionally, a continent diversion may be considered with closure of the bladder neck. The urethroplasty by experienced urologists associated with bedsores surgery could have been discussed but was not be performed for technical reasons (surgery on 2 different hospitals). In the absence of fistula, but the presence of chronic perineal maceration with bad management of bladder, trans-ileal cutaneous ureterostomy with cystoprostatectomy ensures the complete drying of the perineum.

Keywords Spinal cord injury; Perineal pressure ulcer; Urethrococuteous fistula; Urethroplasty; Urinary diversion

Disclosure of interest The authors have not supplied their declaration of conflict of interest.

Reference

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CO06-005-e The medical and surgical care chain in neuro-injured patients: The experience of the Nantes University Hospital from 2004 to 2014

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Introduction The management of pressure sores in neuro-injured patients at the Nantes University Hospital was organized for 30 years in a medical-surgical care chain. The last ten years of this activity are traced in this retrospective study.

Patients and methods All records of patients who had a surgical flap to cover pressure sore between 1 January 2004 and 31 December 2014 were analysed to synthesize results.

Results One hundred and thirteen men and 49 women (n = 162) were operated of 250 flaps. This was mainly spinal cord injured patients (78%). Patients were divided into two groups: pressure ulcer(s) single or multiple (several lesions operated at the same time or later). There were 67% of ischial lesions, 20% of sacral lesions and 12% trochanteric lesions. The most used flap was that of glutæus maximus (82%) for the ischial and sacral lesions, then comes the tensor fascia lata (12%) for trochanteric lesions. Feature of our series (unlike others [1]), the hamstring’s flap is only used as a last resort (6%) in multirecidivist patients. The complication rate delaying delivery to the chair in theoretical time of six weeks is 35%, to be analysed according to age, general health, the size and number of initial lesions. However, the rate of recurrence after healing of the flap is only 10%.

Discussion A medical and surgical management, long and sometimes complex [2], but our long-term results are satisfactory regarding to the low recurrence rate.

Keywords Pressure ulcer; Pressure sore; Decubitus ulcer; Surgical flap; Spinal cord injury

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References

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