Functional results of surgery neurogenic heterotopic ossification at the elbow cerebro-injured: About nine cases

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Keywords: Neurogenic heterotopic ossifications; Elbow; Surgery

Introduction.– Neurogenic heterotopic ossification of the elbow is a frequent complication in head injury patients. The functional impairment may be severe. The goal of surgery is to improve function.

Purpose.– Determine the functional outcome of patients operated for elbow neurogenic heterotopic ossifications.

Patients and methods.– This is a retrospective study of nine patients followed for elbow neurogenic heterotopic ossifications between January 2010 and March 2013. Patients were evaluated before and after surgery with an epidemiologic profil, a range of movement and a functional assessment.

Results.– There were nine patients with 11 operated elbows. The majority of patients were male with seven men and two women, the average age was 30 years (19–41 years). The median duration of coma was 85 days (20–150 days) at all patients had a serious head trauma (GSC < 8), the testing range of motion found an average of flexion at 81° (20–120°), an average of extension at ~53 (~10°, ~90°). The functional assessment: hand-back impossible in nine patients, hand-neck not in eight patients and hand-mouth not in seven patients. All patients received a functional rehabilitation based on continuous passive motion in addition to functional work and surgery excision of heterotopic ossifications. There was a significantly increased mobility after surgical treatment: flexion average became 114° and extension average became ~38° with improvement in functional status.

Discussion and conclusion.– The main objective of surgery for elbow neurogenic heterotopic ossifications is to restore joint mobility and function. The results are generally good as confirmed our results.

Further reading


http://dx.doi.org/10.1016/j.rehab.2013.07.1042

P050-e

Shoulder Heterotopic ossification (HO) outside the neurological context. Think about it when your patient presents a stiff and painful shoulder!

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Keywords: Shoulder; Heterotopic ossifications; X-ray

Introduction.– Heterotopic ossifications (HO) are well known after central neurological problem or prosthetic surgery, but rare after trauma and other shoulder interventions. We present two cases.


Discussion.– HO are mainly observed in a neurological setting but can be present in an orthopedic environment. Radiographic frequency of shoulder HO is 26.7% after rotator cuff surgery or acromioplasty [4], and 15 to 54% after prosthesysurgery [1]. In most cases, there is no clinical relevance. 3.2% of HO are symptomatic after acromioplasty [3]. In our first case, we believe that the hook plate, wounding the acromion, favored HO (release of osseous tissue) in the absence of other risk factors. In the second observation, the risk factors may have promoted the development of HO in the same way as those observed after TBI or medullar damage. Differential diagnosis includes mainly shoulder adhesive capsulitis whose clinic is near and sometimes intricated. Diagnosis of HO is based on X-Rays and CT. Scintigraphy can assess HO maturation and may help the surgical decision. In case of rehabilitation failure, curative treatment is surgical with varying results [2]. Presence of HO delays rehabilitation with prolonged stiffness. In front of a stiff shoulder, after shoulder trauma or surgery, a simple X-ray may help and avoid overdiagnosis of adhesive capsulitis.

References


http://dx.doi.org/10.1016/j.rehab.2013.07.1042