

How to treat heterotopic ossification after osteosynthesis of complex elbow fractures?

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Abstract

Introduction

We demonstrate our protocol for treatment of heterotopic ossification (HO) after osteosynthesis of complex elbow fractures (CEF) by presenting a case of a patient with fracture dislocation of the distal humerus in whom very good end results were achieved.

Case presentation

A 72 year old female with idiopathic osteoporosis suffered fracture dislocation of distal humerus a FDHBCL without distal neurocirculatory deficits. Initial treatment included limb reposition and above elbow backslab immobilization. After 2 weeks, osteosynthesis was performed with no complications. With postoperative rehabilitation (cryotherapy, assisted and active elbow movement exercises) elbow range of movement (ERM) reached +45/90°. 7 months after the injury, despite ongoing physiotherapy, ERM had deteriorated to +30/90° with normal pronation/supination. On x-ray and CT-scan, a large heterotopic ossification was protruding anteriorly into the fossa coronoidea, with a smaller ossification seen on the ulnar side. The initial radial condylus fracture was healed, with osteosynthetic material in a satisfactory position. 4 months later, removal of osteosynthetic material and heterotopic ossification was performed, reaching a full ERM intraoperatively. In the morning before the operation, the ossification was subjected to prophylactic radiotherapy (total dose 7Gy). Postoperatively, the patient received indometacin 25mg 3 times a day for the duration of 4 weeks. With ongoing intensive physiotherapy, a ERM of 0/140° was reached at 9 months post re-operation. X-ray findings were clear of heterotopic ossifications, with a satisfactory anatomical presentation.

Discussion & Conclusions

As proven by this case (and a few others which we also successfully treated using the same protocol), it is our opinion that the combination of arthrolysis with ossification removal, coupled with preoperative prophylactic radiotherapy and postoperative NSAID treatment, is an effective method of post-CEF HO removal and its subsequent prevention.



Biography:

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