

Thermoplastic Brace Treatment for Humerus Fractures

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Abstract

Purpose: To evaluate the satisfaction with the use of a thermoplastic brace and the functional outcomes in the conservative treatment of patients with humeral shaft fractures. **Materials and Methods:** Retrospective study of patients with closed humerus fractures, treated with a thermoplastic brace until union and with a minimum follow-up of 12 months. We recorded the type and location of the fracture, mechanism of injury, injured limb, time of immobilization with plaster and use of brace, complications, and time of consolidation. The evaluation was performed using the visual analog scale (VAS) for pain, the Likert scale for patient satisfaction, the Constant scale for joint balance, and the QuickDash score for functionality. **results:** 17 patients were included (16 female, 1 male), with an average age of 67 years. The initial plaster immobilization lasted 13 days (range 0-32). The patients wore the brace for 8.6 weeks (range 3-16) until radiographic consolidation in the 10th week. The average follow-up was 24 months (range 12-60) and the pain score was 0.5 (range 1-5). 59% were very satisfied with the results and 41% were satisfied. 59% achieved a shoulder flexion >150°; 47%, an abduction >150°; 41%, an internal rotation with thumb between scapulae; and 47%, an external rotation of 70°. The average QuickDASH score was 9. **conclusion:** The use of a thermoplastic brace in the conservative treatment of humerus fractures presented high patient satisfaction and acceptable functional outcomes for the affected limb. **Keywords:** Humerus; fractures; thermoplastic brace; conservative treatment.