4341-A-2227

Fracture dislocation of the PIP Joint - Is extension block pinning a good treatment for unstable fractures?

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Background

Treatment of PIP fracture dislocations is difficult and demanding, especially when the fracture involves more than 40 percent of the joint surface. There are no clear treatment guidelines for these fractures. We present the result of the treatment of a 19-year-old patient with high functional demand playing both volleyball and piano on a semiprofessional level. The patient presented a complex fracture with more 40 percent involvement of the joint surface. As treatment we used extension block pinning. We have evaluated the results of this treatment and compared this to results of similar fractures treated with hemi-hamat osteochondral autograft.

Method

The fracture was treated with closed reduction and extension block pinning. To achieve stability the joint was pinned in 50 degrees flexion. The patient was instructed and guided by the hand therapist in early active motion from day 1. The pin was removed after 20 days and an extension block splint was applied for additional 4 weeks.

Results

The patient was followed closely by hand therapists and in outpatient clinic. By 7 weeks postoperatively, AROM of the PIP joint was 0-100 degree. 6 months after injury the patient was back playing volleyball and piano at the same level as prior to injury.

Conclusion

Extension block pinning is a good choice of treatment in PIP fracture dislocations with 40 precent or more joint surface involvement. However, it is important to note that closed reduction of the joint must be achieved and joint stability after extension block maintained.