

Operative versus Non-Operative Treatment of Scaphoid Non-Union in Children: A Case Presentation and Review of the Literature

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Abstract : Introduction: We discuss the treatment of two young male patients suffering from scaphoid non-union after a traumatic scaphoid fracture. The currently propagated techniques for treating a scaphoid non-union in children are either the operative reconstruction of the scaphoid or the conservative treatment with splinting in a scaphoid cast. Cases: In the first case, we operated on a 13 years old male patient with a posttraumatic scaphoid non-union in the middle third with a humpback deformity. We resected the middle third of the scaphoid and grafted the defect with an iliac crest bone, and the DISI-Deformity was reduced. Fixation was performed with K-Wires and immobilisation in a scaphoid cast. In the second case a 13 years old male patient also with a posttraumatic scaphoid non-union in the middle third and humpback deformity, DISI-deformity, was treated conservatively. Immobilisation in a scaphoid cast for four months was performed. Results: Operative: One year postoperatively the patient achieved a painless free arc of motion. Flexion/Extension 70/0/60°, Radial-/Ulnaruction 30/0/30° and Pro-/Supination 90/0/90°. The computer tomogram showed complete consolidation and bony fusion of the iliac crest bone. Conservative: Six to eight months after conservative treatment the patient demonstrated painless motion and AROM Flexion/Extension 80/0/80°, Radial-/Ulnaruction and Pro-/Supination in maximum range. Complete consolidation in the computer tomogram with persistent humpback- and DISI deformity. Conclusion: In the literature, both techniques are described, either the operative scaphoid reconstruction or the conservative treatment with splinting. In our cases, both the operative and conservative treatments showed comparable good results. However, the humpback- and DISI deformity can only be addressed with a surgical approach.

Keywords : scaphoid, non-union, trauma, operative vs. non operative

Conference Title : ICPGS 2023 : International Conference on Pediatric and General Surgery

Conference Location : Amsterdam, Netherlands

Conference Dates : February 06-07, 2023