Hemi-Hamate arthroplasty for the management of chronic proximal interphalangeal joint fracture dislocations

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Background: Chronic fracture-dislocations involving the proximal interphalangeal (PIP) joint are chal- lenging cases. We conducted this study to analyze the outcomes following hemi-hamate autograft reconstruction of such injuries and to compare our results with the existing literature.

Methods: A retrospective analysis of 21 patients with chronic dorsal PIP fracture-dislocations that were managed with hemi-hamate autograft reconstruction was done. The average articular surface involve- ment was 64%. The average duration between injury and surgery was 9.4 weeks (range, 6 to 16). Quick DASH (Disabilities of Shoulder and Hand) scores, VAS (Visual Analog Scale) scores, range of motion of the PIP joints, DIP (distal interphalangeal) joints, and MCP (metacarpophalangeal) joints were measured during serial follow-up visits.

Results: Union and graft incorporation was seen in all cases. The average Quick DASH score at four weeks post-surgery was 66 and it improved to eight at one year (p-value<0.05). The average VAS score at four weeks post-surgery was 7.66 and it improved to 2.09 at one year (p-value<0.05). The mean flexion of the MCP joint improved from 52.85° at the end of four weeks to 72.38° at one year (p-value<0.05). The average flexion at the PIP joint improved from 10.47° at the end of four weeks to 70.47° at one year (p- value<0.05). The average DIP flexion improved from 38.33° at the end of four weeks to 62.38° at one year (p-value<0.05). The average hand grip strength was 85% of the normal side.

Conclusion: Hemihamate autograft reconstruction is a suitable procedure for the management of chronic PIP joint fracture-dislocations, especially in cases with extensive involvement of the articular surface.