Reduction and Association of the Scaphoid and Lunate versus Internal Brace for Scapholunate Ligament Reconstruction

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INTRODUCTION: The purpose of this study is to compare outcomes in patients with isolated unrepairable scapholunate (SL) injuries treated with the Reduction and Association of the Scaphoid and Lunate (RASL) screw technique versus suture anchors with an Internal Brace (IB).

METHODS: Patients treated with either the RASL screw or IB technique for a complete, non-repairable SL injury were identified. Radiographic and clinical data were recorded pre-operatively, immediate post-operatively, and at final follow-up. Patients were then contacted via telephone survey and qDASH questionnaire was administered. Patients with less than 6 months of follow-up were excluded.

RESULTS: Twenty-five patients (19 male, 6 female) with an average age of 43 years (range 23-66) were identified (RASL = 14 and IB = 11). There were no differences between groups in radiographic parameters or ROM at final follow-up, except for a smaller SL gap at final follow-up in RASL patients (1.5 mm vs. 2.4 mm, p=0.03). Four patients in the RASL group required additional procedures for screw removal secondary to screw breakage (n=1) or screw migration/loosening (n=3). One patient in the IB group had complete failure/diastasis post-operatively and 36% (4/11) of patients had osteolysis at final follow-up. At final follow-up, qDASH was 26 vs. 31 in the IB vs. RASL groups (p=0.79).

DISCUSSION AND CONCLUSION: At our institution, RASL and IB have similar post-operative outcomes when treating SL injuries. It is important to note complications of screw breakage/loosening associated with the RASL technique and recurrent diastasis/gapping and high rate of osteolysis with the IB technique, although this has an unknown clinical significance.