

2019 NEHS Annual Meeting Abstract Submission

ABSTRACT TITLE *	Excision of proximal pole scaphoid nonunion with suture-anchor scapholunate ligament repair: a novel technique
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Name of who will present abstract at NEHS meeting on December 6, 2019 Please note that the same person cannot present more than one abstract at the meeting. *	Joanne Zhang
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ABSTRACT – should include background information and a description of methods, programs, or practices. *

Purpose: There is no current gold standard for treatment of nonunion of the scaphoid proximal pole. The purpose of this study is to describe a novel surgical technique for proximal pole scaphoid nonunions through proximal pole fragment excision with scapholunate ligament repair.

Methods: Three patients (ages 26, 30, and 58 years) with chronic nonunion of the scaphoid proximal pole were treated with proximal pole excision and scapholunate ligament reconstruction with the Arthrex InternalBrace™ system. Postoperative protocol involved a splint for 2 weeks, followed by immobilization in a thumb spica cast for 6 weeks, after which patients began range of motion exercises. The Visual Analog Scale (VAS) for pain assessment, Watson scaphoid shift test, grip strength, and wrist range of motion were assessed at each post-operative visit. Patients were followed between 27 and 53 weeks out from their date of surgery.

Results: Watson scaphoid shift tests were negative from the 6-week postoperative visit and stayed negative at final follow up for all patients. Grip strength of the operative side at the 6-week postoperative visit ranged 30–82 lbs; this increased to 45–108 lbs at final follow up. Preoperative wrist flexion and extension was measured for one patient at 40 and 30 degrees, respectively. At final follow-up, the patient had 50 degrees flexion and 68 degrees extension. For the other two patients, preoperative measurements were not obtained. Between the 6-week postoperative visit and final follow up, flexion/extension improved from 15/15 to 80/60 degrees for one patient and 20/10 to 40/30 degrees for another patient. The latter sustained a dorsal triquetral avulsion fracture in the operative wrist around the 35-week postoperative mark, which was the sole complication in this cohort.

Conclusions: The Arthrex InternalBrace™ can provide an additional option in the management of small proximal pole scaphoid nonunion or scapholunate ligament injury in the young patient or active patient without pancarpal arthritis. Further studies are much needed in determining the optimal indication for the InternalBrace™ on scapholunate ligament reconstruction, as well as the long-term outcomes for such procedures.

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