Partial Excision of Trapezium and Ligament Reconstruction with 2 Suture Anchors
in the 1st Carpometacarpal Arthritis

Jae-Hwi Nho MD, Ki Jin Jung MD, Hyun Sik Gong MD*, Byung-Sung Kim MD
Department of Orthopaedic Surgery, Soonchunhyang University Hospital
Seoul National University Bundang Hospital*

Introduction

In the 1st carpometacarpal(CMC) joint arthritis, surgical treatment is indicated in cases resistant to conservative therapy. Numerous procedures have been described for the treatment of such cases. Recently, Several studies have reported good results of Trapezial excision with or without ligament reconstruction and tendon interposition (LRTI). However, LRTI using FCR tendon is invasive than ligament reconstruction using suture anchor. The purpose of this study was to report the results of the patients with the 1st CMC arthritis who were treated with partial excision of trapezium and ligament reconstruction with suture anchor(JuggerKnot anchor, Biomet, Indiana, USA) in the 1st CMC arthritis.

Materials and Methods

From 2014 to 2017, we treated 25 patients(pts) who had advanced 1st CMC arthritis with joint space narrowing and subluxation accompanying the collapse of the trapezium. The average age of the patients was 65.0 (range: 53~71, SD: 7.4) years. Hemi- excision of the lateral aspect of trapezium were performed. We inserted the anchor at the origin of volar oblique ligament of the trapezium, and inserted 1 more anchor at the base of 2nd metacarpal bone. After inserting 2 anchors, the 1st metacarpal base was fixed with 2 anchors to prevent subluxation. However, there were no. We measured preoperative and postoperative clinical outcomes including pre- and postoperative VAS score, grip strength, wrist ranges of motion, and DASH scores 6 months after operation and the presence of complication.

Results

Mean operation time was 35 minutes (range: 25~50, SD: 10.7). There were no notable complications at postoperative 6 months. There was a significant difference between the preoperative VAS score and the postoperative VAS score, that the preoperative VAS score averaged 7.1±3.3, however, the postoperative VAS score averaged 1.7±2.1 in these 35 patients( p value=0.000). All patients were evaluated in clinical outcomes including ROM, DASH score and Grip strength after postoperative 6 months. All patients considered their result as good or excellent outcomes including ROM, and improved the functional score.

Discussion

Partial excision of trapezium and ligament reconstruction with suture anchor could be an excellent option for the advanced 1st carpometacarpal arthritis. This method is simple and easy than the trapeziometacarpal arthrodesis or LRTI using FCR tendon. A new surgical procedure can be attempted with the improvement of the strength of the suture anchor.

Soonchunhyang University Hospital
Department of Orthopaedic Surgery