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Funktionelle und subjektive Nachuntersuchung traumatischer ulnarer Diskusläsionen am Handgelenk nach arthroskopischer Naht

Promotionsfach: Orthopädie
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The objective of this retrospective study was to determine functional and subjective outcomes of patients with Palmer type 1B lesions repaired arthroscopically. It was also investigated whether clinical outcomes are related to ulna length. In addition, an assessment on a subpopulation of patients was made. These patients received an ulna shortening procedure following arthroscopic suture of their Palmer type 1B lesion. It was evaluated whether the ulna shortening procedure would improve these patients' persistent ulno-carpal symptoms.

Forty-six patients with arthroscopic repair of Palmer type 1B tears were reviewed. There were 23 males and 23 females. The average age was 34 years (range, 10 to 58 years). The average follow-up was 11 months (range, 6 to 23 months), and the delay to surgery was 9.7 months. All patients suffered ulnar-sided wrist pain and were diagnosed with Palmer type 1B tears. The tear was repaired arthroscopically with an outside-in suture technique. The ROM, grip strength, pain, Modified Mayo Wrist Score, DASH Score, and ulna length (static and dynamic) were evaluated during all follow-ups.

The subpopulation was comprised of five patients (3 males and 2 females). At the time of the arthroscopic repair, the patients' average age was 37 years (range, 16–52 years). Average time to follow-up was 14 months (range 10–23 months). Citing persistent ulno-carpal symptoms, these patients elected ulnar shortening an average of 17 months (range 13–29 months) following the arthroscopic repair. When the shortening procedure was performed, the average age was 38 years (range, 17–53 years), and the follow-up took place after 7 months (range, 5–9 months). Prior to ulnar shortening the average static ulnar variance was 0.2 mm (range, 1 to 2 mm), the average dynamic ulnar variance was 1.4 mm (range, 1 to 2 mm).

In the group of patients having solely received an arthroscopic suture, there was a reduction in pain. Grip strength averaged 90% of the contralateral side. Postoperative ROM averaged 128° for the extension/flexion arc, 41° for the radial/ulnar deviation arc, and 171° for the pronation/supination arc of motion. However, no relation could be found between ulna length and clinical outcome. The Modified Mayo Wrist Score was rated excellent in 22% of patients, good in 41%, fair in 27%, and poor in 10%. The average DASH Score was 22 (range, 0 to 58.33). In the subpopulation, ulnar shortening brought about further reduction in pain after the arthroscopic repair of the TFCC had already reduced it. As measured by a visual analogue scale, the average value after ulnar shortening was 2.2 (range, 0.7 to 5.0). The average static ulnar variance was -3.4 mm (range, -5 to -1 mm). Patients were very satisfied with the results of the ulnar shortening and four out of five indicated that it had significantly improved their symptoms and they would elect ulnar shortening again. Postoperative ROM as a percentage of the contralateral side averaged 90% for the extension/flexion arc, 80% for the radial/ulnar deviation arc, and 100% for the pronation/supination arc of motion. In addition, there was an improvement in grip strength. The Modified Mayo Wrist Score was rated excellent in three patients, and fair in two patients. The average DASH Score was 22 (range, 0–53).

Arthroscopic repair of Palmer type 1B tears yields satisfactory results. Sixty-three percent of patients achieved good to excellent results, experienced increased ROM, grip strength, and pain relief. Ulnar neutral or positive variance is not a contraindication for suture repair, and does not require simultaneous ulna shortening when repairing the triangular fibrocartilage complex arthroscopically. A delay to surgery did not affect clinical outcome. Based on the subpopulation it could be concluded that patients who have a dynamic ulnar positive variance and experience persistent ulno-carpal symptoms following arthroscopic repair of a Palmer type 1B lesion, benefit from an ulnar shortening procedure. Shortening the ulna can improve these patients' symptoms of pain, ROM, and grip strength.