Five- to 18-year Follow-up for Treatment of Trapeziometacarpal Osteoarthritis: A Prospective Comparison of Excision, Tendon Interposition, and Ligament Reconstruction and Tendon Interposition


Thumbs with a minimum of 5 years (median, 6 years; range 5-18 years) after surgery (n=153) were reviewed with subjective (ie, pain relief and restriction of activity) and objective assessments (ie, grip strength and key and tip pinch strengths) that had been used at the 1-year assessment.

No difference in pain relief was found in the 3 groups, and good results were found in 120 (78%) patients. At final assessment, 14 patients had rest pain with or without activity restrictions, although all were better than before surgery.

Grip strength and key and tip pinch strengths did not differ among the 3 groups. All 3 groups showed improved key and tip pinch strengths. Before surgery, the contralateral normal thumb was stronger than the affected thumb, but by final assessment key and tip pinch strengths were similar in nonoperative and operative thumbs.

Although improvements in grip strength achieved at 1 year were preserved, the key and tip pinch strength deteriorated by the last assessment, regardless of surgery type. However, the contralateral normal thumbs were also weaker, leading to the conclusion that deterioration in thumb strength is age-related and was not related to the surgical procedure.

Outcomes were similar between the 3 groups 5 years after surgery. No benefit is found to tendon interposition or ligament reconstruction in the long term.
In this well-designed Level 1 study from Nottingham University Hospitals and the Pulvertaft Hand Center and Royal Derby Hospital, the authors examined the results of surgical treatment of trapeziometacarpal osteoarthritis. Trapeziometacarpal osteoarthritis is a relatively common problem in postmenopausal women, and when conservative measures fail surgical intervention is often indicated. The 3 main surgical options are excision of the trapezium, excision and tendon interposition, and excision with tendon interposition and ligament reconstruction. Although most studies have failed to demonstrate a significant difference between any of the procedures, most of these studies were of relatively short-term follow-up, and many surgeons have continued to advocate for some type of interposition or reconstruction to prevent possible proximal migration of the metacarpal with resultant thumb shortening and weakness in the long-term. Here, the authors were able to clearly demonstrate that the lack of difference between the 3 procedures remained with mid- to long-term follow-up.

Occam’s razor, or the law of parsimony, economy, or succinctness, is often summarized as “all things being equal, a simpler explanation is better than a more complex one.” The razor is attributed to the 14th-century English logician, theologian, and Franciscan friar Father William of Ockham. Although Occam’s razor is certainly more applicable to philosophy than surgery, the analogy “all things being equal, a simpler procedure is better than a more complex one” would also seem to hold true. The results of this study are certainly consistent with this principle.

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