

Hypothenar fat pad flap

The hypothenar fat pad flap interposes adipose tissue from the hypothenar eminence between the [median nerve](#) and overlying [transverse carpal ligament](#) and surgical scar.

Indications

[Recalcitrant carpal tunnel syndrome](#)

Case series

2015

18 consecutive patients (14 women, 4 men) who had recurrent CTS. The average age was 61 years. All patients had undergone the index [carpal tunnel release](#) 5 to 22 months ago. From November 2009 to November 2013, they were treated by decompression of the median nerve and a vascularized hypothenar fat pad flap. The intraoperative findings were assessed as well as the level of pain, recovery of sensory and motor dysfunction, Hoffmann-Tinel sign, nerve conduction studies, grip and pinch strength, and Disability of Hand and Shoulder Questionnaire (DASH) score. All patients were reevaluated at an average of 22 months after revision surgery. Results After revision surgery, 15 patients reported symptomatic improvement. No patient reported worsening of symptoms. A median DASH score of 18 was reached. Grip strength recovered to 90% of the contralateral side. Overall, 15 patients were satisfied with the result of the operation; 3 did not cope with pain and dysfunction. Recurrence was not found in any case. Conclusion The hypothenar fat pad flap can be used successfully as an adjunct to microsurgical neurolysis for the treatment of recurrent CTS secondary to perineural scarring, although a functional deficit remains in some patients.

2012

25 patients (27 hands) who had both clinical and electrophysiological confirmation of true recurrent carpal tunnel syndrome from January 2004 to December 2009. In all the patients, after releasing the nerve a vascularised fat pad flap was mobilised from the hypothenar region and sutured to the lateral cut end of flexor retinaculum. The patient characteristics, co-morbidities, duration of symptom, interval between first release and revision surgery and intra-operative findings were assessed against post-operative relief of pain, recovery of sensory and motor dysfunction. The average age of the patients was 58 years (43-81) and the dominant hand was involved in 22 patients. Intra-operatively the nerve was compressed by scar tissue connecting the previously divided ends of the retinaculum in 18 and nine had scar tissue and fibrosis around the nerve. Following surgery 16 patients had complete recovery (asymptomatic at the first follow-up), eight had delayed recovery (partial recovery of symptoms at final follow-up) and three had a poorer outcome (persistence of preoperative symptoms at the final follow-up). The patients with delayed recovery/poorer outcome had a) Early recurrence; b) Diabetes mellitus; c) Obesity; d) Cervical spine problems; e) Involvement of non-dominant hand; and f) Intraoperative scar tissue and fibrosis. The hypothenar fat pad transposition flap provides a reliable source of vascularised local tissue that can be used in patients with recurrent carpal tunnel syndrome. The factors that were associated with poorer/delayed recovery were

involvement of non-dominant hand, recurrence within a year from the previous surgery, intra-operatively scar tissue in the carpal tunnel and associated co-morbidities, like obesity diabetes mellitus and cervical spine problems ¹⁾.

1996

A retrospective study reviews 62 hands in 58 patients (46 non-workers' compensation and 16 workers' compensation) with recurrent symptoms after failed open carpal tunnel release who underwent revision carpal tunnel decompression and in whom a hypothenar fat pad flap was used. The follow-up period averaged 33 months. Patient satisfaction was 6 in the non-workers' compensation group and 4 in the workers' compensation group. Average time to return to work for the non-workers' compensation group was 12 weeks, compared to 37 weeks for the workers' compensation group. Study results indicate that the hypothenar fat pad flap produces excellent results in procedures designed to alleviate recalcitrant idiopathic carpal tunnel syndrome ²⁾.

¹⁾

Karthik K, Nanda R, Stothard J. Recurrent carpal tunnel syndrome—analysis of the impact of patient personality in altering functional outcome following a vascularised hypothenar fat pad flap surgery. J Hand Microsurg. 2012 Jun;4(1):1-6. doi: 10.1007/s12593-011-0051-x. Epub 2011 Aug 13. PubMed PMID: 23730080; PubMed Central PMCID: PMC3371121.

²⁾

Strickland JW, Idler RS, Lourie GM, Plancher KD. The hypothenar fat pad flap for management of recalcitrant carpal tunnel syndrome. J Hand Surg Am. 1996 Sep;21(5):840-8. PubMed PMID: 8891983.

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