**Kang H, Koh IH, et al. Endoscopic versus open release in patients with de Quervain's tenosynovitis: a randomised trial. Bone Joint J. 2013;95-B(7);947-51.**

PMID: 23814248

Design: randomized clinical trial

Purpose of study: to compare symptom and functional outcomes of endoscopic versus open surgical release in patients with de Quervain’s tenosynovitis

Population/sample size/setting:

* 52 patients (4 men, 48 women, mean age 50) treated for de Quervain’s tenosynovitis at a university orthopedics department in Seoul
* Eligibility required only age over 20 with “recalcitrant” de Quervain’s
* Exclusion criteria were inflammatory disease such as rheumatoid arthritis or gout, previous injury to the wrist, previous release for de Quervain’s tenosynovitis, other symptomatic upper limb conditions such as rotator cuff, epicondylitis, carpal tunnel syndrome, cognitive impairment which would preclude answering questionnaires, any workers’ compensation issues, and any factor which would prevent participation in the study for 24 weeks

Interventions:

* All patient underwent release of the abductor pollicis longus and extensor pollicis brevis tendon sheath by the same surgeon
* Randomized to either endoscopic (n=27) or open release (n=25)
  + Endoscopic release was done using two portals placed 1 cm distal and one placed 3 cm proximal to the radial styloid along the course of the first extensor compartment, after which a 1.9 mm arthroscope was passed through the proximal portal and a hook-shaped knife was introduced through the distal portal, releasing the stenotic tendon sheath and then closing the wound with Steri-Strips
  + Open release was done through a 1.5 cm longitudinal incision over the first extensor compartment at the radial styloid, protecting the superficial branches of the radial nerve and opening the extensor retinaculum at its dorso-ulnar corner, after which a compression dressing was applied and removed the following day
  + Both groups were encouraged to move their wrists and thumbs beginning the day after surgery

Outcomes:

* Followup was done at 2, 6, 12, and 24 weeks after surgery, but only the 12 and 24 week outcomes are reported
* The groups were compared on VAS pain, DASH functional scores, and on satisfaction with the scar at 24 weeks
* Between the time of surgery and 12 weeks, both groups experienced significant improvements in pain and DASH function compared to baseline, with a greater improvement in the endoscopic group
  + VAS scores in the endoscopic went from 7.4 to 2.7, and VAS scores in the open group went from 7.5 to 3.8
  + DASH scores in the endoscopic group went from 52.2 to 16.9, and DASH scores in the open group went from 57.3 to 27.1
* At the 24 week followup, the VAS and DASH scores in endoscopic and open groups were statistically equal (VAS scores of 1.5 and 1.6 respectively and DASH scores of 3.8 and 7.3 respectively)
* Transient superficial radial nerve injury symptoms were significantly less common in the endoscopic group (3 patients) compared to the open release group (9 patients)
* Return to work times were not different between groups (6.9 weeks for the endoscopic group and 7.8 weeks for the open group)
* Scar satisfaction was significantly better among the endoscopic patients (mean score of 8.0 on a 10 point scale) than among the open release patients (mean score 6.1)

Authors’ conclusions:

* Satisfactory outcomes at 24 weeks are achieved with both endoscopic and open release of de Quervain’s tenosynovitis
* There is more rapid pain and functional improvement with endoscopic release as assessed 12 weeks after surgery
* There is a lower risk of superficial radial nerve injury with endoscopic than with open release
* There is less scar formation at 24 weeks with the endoscopic than with the open procedure
* Although the surgeon and patients could not be blinded, the outcome assessment was done by a blinded researcher

Comments:

* The authors’ introduction seems to show an incomplete appreciation of the purpose of intention to treat (ITT) analysis, implying that it is a drawback that ITT analysis is based on original treatment assignment and not on treatment actually received; this feature is what makes ITT analysis essential to decision-making when patients are first evaluated and when initial treatment plans are decided upon
* However, since all patients received the treatment to which they were randomized, the ITT and the as-treated analyses were identical
* The entry criterion of “recalcitrant” de Quervain’s is not defined, but apparently did exclude patients with prior surgical release
  + Prior interventions cannot be determined because they were not described
  + However, the duration of symptoms was an average of 9.7 months for the endoscopic group and 11.2 months for the open release group
* Workers’ compensation patients were excluded, and the number of patients employed (and the nature of their jobs) is not reported
* However, the differences in scar satisfaction, superficial radial nerve injury, and the more rapid improvement in pain and function with endoscopic than with open release, together with the equally satisfactory outcomes at 24 weeks, together would support the basic conclusions of the authors

Assessment: adequate for some evidence that in the setting of de Quervain’s tenosynovitis, 24 week outcomes are equally satisfactory with endoscopic and with open release, and return to work times are approximately equal, but there is a lower risk of transient injury to the superficial radial nerve with endoscopic release, as well as better scar satisfaction and a slightly more rapid resolution of pain and of functional limitations