CAPITATE-TRAPEZOID FUSION AS A TREATMENT FOR CAPITATE-TRAPEZOID JOINT OSTEOARTHRITIS

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A right-handed 63-year-old maintenance worker presented with spontaneous pain at the left thumb base for 4 months (VAS 7/10). Clinical examination showed tenderness over both TM and STT joints and over the base of the second and third metacarpal. QuickDash score was 29.5. X-ray and MRI confirmed a combined TM and STT osteoarthritis, but also osteoarthritis over the capitate-trapezoid joint. (Fig 1)

Conservative treatment did not provide any pain relief and surgery was proposed to the patient. A trapeziectomy with ligament reconstruction and tendon interposition (LRTI) was performed, combined with a capitate-trapezoid fusion using a headless compression screw.

After 6 months pain decreased (VAS 3/10) and QuickDash score was 9.1. Opposition was 8 and retropulsion was 2. Opening of the first web space was 50°. Key pinch was 5kg, Precision pinch was 2.5kg and grip strength was 20kg (right side 28kg).

Conventional radiography and computed tomography after 3 months showed a bony bridge between the capitate and the trapezoid.

Symptomatic capitate-trapezoid osteoarthritis is uncommon, neither isolated or in combination with a trapeziometacarpal osteoarthritis. A review of the present literature does not report a symptomatic osteoarthritis of the capitate-trapezoid joint. One would not expect osteoarthritis in the capitate-trapezoid joint since the distal carpal row is very rigid and the intrinsic ligaments do not allow any intercarpal motion. In our case, osteoarthritis may be possibly induced or aggravated by chronic trauma during previous long term professional activities. One should keep in mind that any case presenting persistent pain after successful trapeziectomy and cuneiform osteotomy of the trapezoid should be investigated to exclude this type of unusual arthritis. It highlights the possibility of osteoarthritis in carpal joints other than the TM or STT joints in patients with basal thumb pain.

![Figure 1 - capitate-trapezoid joint osteoarthritis seen on MRI preoperative.](image1)

![Figure 2 - capitate-trapezoid fusion seen on CT 3 months postoperative.](image2)