

Metacarpophalangeal Joint Arthrodesis with Trapezial Resection and Soft Tissue Interposition

Brian Adams, MD
University of Iowa Hospitals and Clinics
Iowa City, IA

Clinical Presentation

This 61 year old female presented with a 3 year history of increasing basilar thumb pain and decreasing pinch strength. The patient had failed non-operative management including splinting and steroid injections, and was interested in more definitive treatment as her symptoms were worsening.

Examination showed joint line tenderness, a positive grind test, and mild subluxation of the trapeziometacarpal joint (TMJ). The metacarpophalangeal joint (MCPJ) was slightly tender and swollen but the most substantial finding was a 45 degree hyperextension deformity of the MCPJ that was exacerbated during pinch.

Radiographs showed Eaton Stage 3 arthritis of the TMJ with mild subluxation and mild arthritis of the MCPJ with a hyperextension deformity.

PRE-OP RADIOGRAPHS



Surgical Management

Surgical treatment was discussed and she elected to undergo trapezial resection with soft tissue interposition for the trapeziometacarpal joint (TMJ) arthritis and simultaneous arthrodesis for the unstable and arthritic metacarpophalangeal joint (MCPJ).

A typical TMJ procedure was completed first using a tendon graft for interposition. The MCPJ arthrodesis was performed secondly through a separate incision using the Extremity Medical XMCP™ Intramedullary Fusion Device. She was protected in a postoperative plaster splint for 2 weeks, followed by a removable thumb spica splint for an additional 4 weeks during which she performed gentle range of motion exercises.

Outcome

The surgical sites healed uneventfully and she recovered rapidly. The XMCP™ Intramedullary Fusion Device provided very stable fixation and thus there was no need for strict immobilization until radiographic union. At 6 weeks, radiographs showed union of the arthrodesis and good TMJ alignment. She recovered good interphalangeal joint (IPJ) motion and the typical TMJ range of motion following a soft tissue arthroplasty. Three months following surgery she was using the thumb for routine daily tasks.

POST-OP RADIOGRAPHS AND PHOTOGRAPHS (6 WEEKS)

