Long-term Follow-up of The Moberg Key Grip Procedure
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Abstract

The long-term results of the key grip procedure (tenodesis of the flexor pollicis longus tendon to the radius, release of the A1 pulley, and percutaneous pin fixation of the interphalangeal joint of the thumb) were evaluated in 10 tetraplegic patients. Seven patients also had tenodesis of the extensor pollicis longus and brevis tendons to prevent flexion at the metacarpophalangeal (MP) joint. Patients were examined an average of 7.4 years after surgery. Progressive flexion of the MP joint gradually occurred, indicating failure of the extensor tenodesis. Excessive bowstringing of the flexor pollicis longus tendon across the MP joint occurred in nine patients. Because of failure of the extensor tenodesis and bowstringing of the flexor tendon, the patients had to progressively extend the wrist further to pinch small objects. Functional testing demonstrated improved hand use in eight patients. Lateral pinch strength was related to wrist extension torque.