

Resection Arthroplasty and Stabilization of the 5th Carpometacarpal Joint for Post Traumatic Arthritis

Fares Al-Jahdali, Shakeel Rashid, Assaf HAUL Kadar

We present a case of a 29-year-old male with a delayed presentation of right 5th carpometacarpal (CMC) joint fracture dislocation that resulted in a painful post traumatic arthritis. The patient wished to preserve range of motion and function and elected to proceed with resection arthroplasty of the arthritic joint and stabilization of the 5th metacarpal to the intact 4th metacarpal and 4th CMC joint ("Dubert Procedure"). This case highlights the utility of Dubert procedure as a viable surgical option for managing post-traumatic arthritis of the 5th CMC joint, in particular in young individuals who wish to preserve motion.

A standard dorsal approach to the 4-5th CMC joint was carried out while protecting the dorsal branch of the ulnar nerve. The arthritic joint was exposed, and the level of the resection was determined and confirmed with fluoroscopy. The 5th metacarpal was provisionally stabilized to the 4th metacarpal with a 0.45 KW to prevent subsidence and to maintain the 5th metacarpal height. The resection was performed while preserving the hamate articular surface. The space between the bases of the 4-5 metacarpal bases was burred to expose the subchondral bone, afterward bone graft was packed to that space. 2.7 and 2.4 screws were utilized to fix the 5th metacarpal to the 4th metacarpal while maintaining the length and controlling rotation of the 5th ray. Following the resection of the base of the 5th CMC, GelFoam was placed in the void to minimize dead space.

While uncommonly indicated, the "Dubert Procedure" reported outcomes are satisfactory in terms of pain, function and range of motion. At six weeks follow up our patient reported good pain relief with full fingers range of motion. Radiographic evaluation revealed early signs of healing of the fusion site between the bases of the 4th and 5th metacarpals.