

**Format:** Abstract

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## **[Maia trapeziometacarpal implant for treatment of advanced osteoarthritis of the basal joint of the thumb].**

[Article in Czech]

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### **Abstract**

**PURPOSE OF THE STUDY:** Osteoarthritis of the thumb's basal joint is a frequent and, in some cases, very painful condition that usually affects middle-aged and elderly women. Several surgical procedures have been proposed for severe carpometacarpal (CMC) joint arthritis; of these, joint replacement has proved to be an effective approach to its treatment. The aim of this study is to present the outcomes of the total non-cemented **trapeziometacarpal** implant **Maia** in the treatment of more advanced stages of this disease.

**MATERIAL AND METHODS:** Thirty-six total **trapeziometacarpal** joint replacements in **34 patients treated in 2008 for advanced CMC arthritis** (Eaton and Littler stages III and IV) were evaluated. Indications for surgery after failure of conservative treatment included: pain, reduced grip and pinch strength and restricted range of thumb motion, all of them interfering with daily activities. The average follow-up time was 42 months, with a minimum of 37 months.

**RESULTS:** At the final follow-up, thumb opposition to the base of the little finger was present in all patients. The average grip strength of the hand increased from 15.8 kg pre-operatively to 26.8 kg post-operatively. The average key pinch strength increased from 2.7 kg to 5.7 kg and the average tip pinch strength from 2.3 kg to 4.9 kg. All patients reported substantial pain relief. The average VAS values were 8.4 points before surgery and 0.4 points at 3 years after surgery. Pre- and post-operative DASH scores were 71.7 and 22.5, respectively. One patient had aseptic cup loosening that required revision surgery. No signs of implant loosening in any other patient were shown by radiographic studies at the final follow-up. One patient sustained a traumatic implant dislocation that was treated by open reduction.

**DISCUSSION:** Total replacement of the CMC joint is a method with functional outcomes comparable with or better than other surgical procedures. Rapid post-surgery recovery is

its clear advantage. The implant provides good stability and no prolonged immobilisation is needed.

**CONCLUSIONS:** In our group, total arthroplasty of the thumb CMC joint provided pain relief, improved thumb motion and pinch strength. At present, CMC joint arthroplasty is recommended to elderly patients with symptoms of advanced arthritis (stage III or early stage IV) refractory to conservative treatment or to well-informed younger persons accepting reduced demands on the treated hand's activities.

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