

A-0172 Dual mobility trapezio-metacarpal implant: Principles and clinical series

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We present the results of a study of the first 65 Touch dual-mobility prostheses with a follow-up of more than 1 year. Articulated prostheses are becoming increasingly popular for the treatment of trapeziometacarpal osteoarthritis because they provide better results in terms of mobility, strength, and recovery time than trapeziectomies. Early dislocation rate remains high. Dual mobility TM implant with an increased radius of curvature, and an increased range of motion should help to reduce the dislocation rate, the rate of late trapezium loosening, and wear of polyethylen insert. We have conducted prospective followup of our patients and present the results of the first 65 cases operated by 3 surgeons with a follow-up of more than 1 year of a total of 450 implants. The prosthesis was implanted in a context of revision of painful trapeziectomy in two cases. Clinical and radiological data were entered into a review database and were analyzed by an independent observer. This series comprised 54 women and 11 men with a mean age 65.2 years. Mean follow-up at the time of review was 18.6 months. The level of work or leisure activities was light in 51% of cases, heavy in 10% of cases, and limited to housework in 39% of cases. The mean duration of resin immobilization was 21 days (2 months after trapeziectomies), followed by self-rehabilitation. The mean preoperative QUICK-DASH score was 37.14, and the mean postoperative QUICK-DASH score was 18.8. The mean pain VAS score decreased from 7.22 to 1.54. Significant gains of mobility were observed, especially for thumb abduction: + 44%, which restored complete opening of the thumb in the majority of cases. Antepulsion was increased by 27%. Kapandji score was increased by 13%. Strength was improved by 46%. 37% of patients presented metacarpophalangeal hyperextension before the operation versus 17.5% after the operation. There were 10 Z-deformity thumbs before the operation, and all were corrected postoperatively, without an associated metacarpophalangeal joint procedure. The Dell stage distribution was: stage 2: 15 cases, stage 3: 20 cases and stage 4: 8 cases. The M1–M2 ratio was 0.68 before the implant and increased to an average of 0.74 (normal value) immediately after the operation. This ratio was maintained at last follow-up. Restoration of normal length of the thumb accounts for correction of metacarpophalangeal hyperextension in one half of cases as a result of restoration of bone axes and muscle levers. It also contributes to recovery of strength by restoring normal muscle levers. No case of dislocation was observed in this series of 450 prostheses, partly due to the increased radius of curvature of the metacarpal head and partly due to the large range of joint motion of the prosthesis, which compensates for small errors of orientation of the cup, thereby avoiding a cam effect. Our preliminary results are superior to those of all series of nonconstrained prostheses in terms of dislocation rate, as no implants needed to be removed because of repeated dislocation. A longer follow-up will be necessary to confirm the low rate of loosening and wear of the implant.