High revision rates with the metal on metal Motec trapeziometacarpal total arthroplasty.

Results after trapeziometacarpal (TMC) total joint arthroplasty are divergent and recently there has been many concerns regarding the metal on metal (MoM) articulations.

The aim of this study was to evaluate the short term results after Motec Basal Thumb Joint Prosthesis with MoM articulation and compare the results with patients who were revised.

We retrospectively evaluated a consecutive series of 42 Motec MoM Prosthesis (40 patients, 33 women) performed between 2009 and 2012. Revision rates were calculated and patients were divided in patients with the prosthesis in situ and in patients who had been revised with implant removal and trapeziectomy. The two groups were compared concerning Disability of the Arm Shoulder and Hand (DASH) score, pain on a numerical ranking scale (NRS), serum chrome and cobalt concentrations.

After 4 years 17 (40%) of the 42 prostheses were revised. Revisions were performed due to aseptic loosening of the cup (9), pain (4), dislocation (3) and deep infection (1). Mean follow-up was 2.2 years (range 1.2-3.8) and 2.1 years (range 1.3-3.8) for the prosthesis and the revision group, respectively. The DASH score was comparable between groups (p= 0.77). Pain at rest and in activity was comparable between groups. The frequency of patients with serum chrome and cobalt levels above 10 nmol/L was comparable between the two groups (p=0.28). DASH scores were significantly higher in patients with elevated serum chrome and cobalt.

The revision rate after TMC prosthesis in this study is disappointing. However, DASH scores after revision with implant removal and trapeziectomy are acceptable. In this study elevated chrome and cobalt levels was associated with at higher dash score but not associated with revision.