

## 20 Years of Experience with a Cementless Monoblock Cup in Total Hip Arthroplasty – a prospective study.

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### Introduction:

Because of early loosening of cemented acetabular components uncemented systems were developed such as this evaluated elastic monoblock polyethylene cup, coated with titanium. Is this implant still advisable?

### Methods:

93 consecutive cementless THA were performed in a prospective study using a titanium coated cup in 80 patients, average age 52 years. 23 patients (26 hips) had died. The average follow up time of all 57 living patients (67 hips) was 19.3 years. There was no patient lost to follow-up. The patients were clinically evaluated using the Harris Hip Score. Manual and digital radiographic assessment, survival analysis and statistics were performed.

### Results:

14 acetabular components had been revised after a mean interval of 12.3 years. Reasons were aseptic loosening in five, wear with osteolysis in seven and infection in two cases. Wear of the cup was 0.119 mm per year. Only one cup seemed radiographically loose. Malposition did not necessarily lead to failure of the implant. The mean Harris Hip Score for the unrevised patients was 87.5 points, 91.8% reported having no or only mild pain not affecting daily activities. Cumulative survival rate of the cup for aseptic loosening was 94.4%, probability of revision 82.7%. Significantly better survival rate was seen for older patients.

### Discussion and Conclusion:

This prospective study shows an excellent osteointegration, biocompatibility and longevity of this titanium coated polyethylene cup at 20 years with good patient satisfaction and confirms the implants' philosophy. The results of this study justify its further use.