

Paper IV

**Liner exchange procedures compared to whole
cup revisions in revision of uncemented
acetabular cups.**

**A study of 1649 revisions from the Norwegian
Arthroplasty Register**

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Abstract

We analyzed the results of different strategies in revision of primary uncemented acetabular cups reported to the Norwegian Arthroplasty Register. The aim was to compare the risk of further cup revisions after liner exchange procedures and whole cup revisions. Furthermore, we compared the results of exchanging well-fixed cups with those of exchanging loose cups.

The revisions were reported between September 1987 and April 2005. The following groups were compared: Group 1) Exchange of liner only (n=318), Group 2)

Exchange of well-fixed cups (n=398), and Group 3) Exchange of loose cups (n=933).

We found that the risk of a second cup revision was lower after revision of well-fixed cups (RR=0.56, 95 % CI [0.37-0.87]) and loose cups (RR=0.56 [0.39-0.80]),

compared to revision of liner only. The most frequent reason for second cup-revisions was dislocation, accounting for 28 % of the re-revisions. Other reasons for second cup revisions included pain (12%), cup loosening (11%) and infection (9%). Re-revisions due to pain were less frequent when whole cups (fixed or loose) were revised compared to liner-revisions (RR=0.20 [0.06-0.65] and RR=0.10 [0.03-0.30], respectively). Risk of second cup revisions due to infection however, did not differ between the groups.

In the present study exchange of liner only, had a higher risk of re-revision compared to revision of the whole cup. Our results suggest that the threshold for revising well-fixed cups in the case of liner wear and osteolysis should be lowered.