

Postoperative Dislocation Rates in a Large Prospective Continuous Series of Primary Total Hip Arthroplasties Using a Modern Dual Mobility Cup

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INTRODUCTION:

Prosthetic dislocation is a common early complication after total hip arthroplasty (THA), with rates ranging from 2% to 5% in most series. The use of a dual mobility cup (DMC) has been shown to reduce the risk of dislocation in primary and revision surgery. In our institution, we have exclusively used a modern DMC for primary THA over the past 20 years. The aim of this study is to report the postoperative dislocation rate in a large prospective continuous series of primary THA using a DMC.

METHODS: This prospective continuous monocentric study included 1,215 primary THA surgeries performed between 2009 and 2019 using the same cementless last generation DMC (cylindro-hemispherical press fit DMC with double coating of plasma spray titanium and hydroxyapatite). The mean follow up was 6.56 years \pm 1.6 [4-14], and the mean age at implantation was 69.2 \pm 10 years. Patients received clinical and radiological follow up at 45 days, 1 year, 5 years, and 10 years. Complications and revisions were reported prospectively.

RESULTS:

At the last follow up, 131 patients had died and 86 were lost to follow up. The postoperative dislocation rate was 0.57% (7 cases), with only 2 cases requiring revision. In addition, we report 16 femoral fractures, 12 infections requiring debridement and polyethylene liner exchange, and 4 deep infections requiring explantation and two stages revision. No aseptic cup revisions were reported at the last follow up.

DISCUSSION AND CONCLUSION:

Our findings suggest that the use of a modern DMC is a viable option to decrease the postoperative dislocation rate in primary THA. The last generation of DMCs with double coating of plasma spray titanium and hydroxyapatite appears to have a lower risk of aseptic loosening than the previous generation. Therefore, the modern DMC can provide both stability and good long-term fixation and can be safely used in primary THA.