

Dual Mobility

Long-Term Data

Literature Update



Dual Mobility Literature Update

This document summarizes a range of recently published data on the use of Dual Mobility in both primary and revision THA.

Dual-Mobility Constructs in Primary and Revision Total Hip Arthroplasty: A Systematic Review of Comparative Studies

Reina N et al.
The Journal of Arthroplasty
34 (2019) 594-603

Key Message: This systematic review of comparative studies supports the efficacy of both monobloc and modular Dual Mobility constructs in minimizing the risk of dislocation and revision due to dislocation after both primary and revision THA when compared to control constructs.

A systematic review of the medical literature covering prospective and retrospective studies that compared Dual Mobility constructs with controls for primary or revision THAs was undertaken to better understand the benefits and risks of these implants in terms of reducing dislocations, long-term survivorship, and associated complications.¹

Five studies with primary THAs and six with revision THAs were analyzed. The Dual Mobility studies identified include both modular and monobloc systems, and the results showed that the overall rate of dislocation was lower in the Dual Mobility group for both primary and revision THA.¹

In primary THA, the overall risk for dislocations was more than 4-fold higher for the control as compared to the Dual Mobility group, while there was a nearly 3-fold increase in the risk of revision due to dislocation for the control group.

Similarly, for patients undergoing revision THA, the results showed the overall risk of dislocation was more than 3-fold higher for the control as compared to the Dual Mobility group. The risk of re-revision due to dislocation was also significantly higher for the control group.

Dislocation Rate			
	Dual Mobility	Control Group	P value
Primary THA	0.9%	6.8%	P<0.001
Revision THA	2.2%	7.1%	P<0.01

	Odds Ratio with 95% CI (Control to Dual Mobility)	P value
Primary THA		
Dislocation	4.06 (1.70 to 9.71)	P<0.001
Revision due to Dislocation	2.97 (1.04 to 9.28)	
Revision		
Dislocation	3.25 (1.63 to 6.45)	P<0.001
Re-Revision due to Dislocation	4.88 (2.21 to 10.57)	P<0.001
All-Cause Re-Revision	2.46 (1.61 to 3.75)	P<0.001
Re-Revision for Aseptic Loosening	3.23 (1.08 to 9.68)	P=0.037

Dual Mobility Cups In Total Hip Arthroplasty After Failed Internal Fixation Of Proximal Femoral Fractures

Boulet S et al.
Orthopaedics & Traumatology:
Surgery & Research

Key Message: Use of Dual Mobility cups in the context of THA after failed internal fixation of proximal femur fractures, results in a low implant dislocation rate. The authors recommend its use in this indication with high risk of postoperative instability.

A retrospective study was conducted to evaluate the implant dislocation rate for 33 consecutive patients (4 men, 29 women) who underwent Dual Mobility THA following failed internal fixation of a proximal femur fracture.² The study hypothesized that using Dual Mobility cups in this specific context would reduce the risk of post-operative instability. The primary outcome was the occurrence of implant dislocation.

The initial indication was a peri-trochanteric fracture (n = 22, 67%), femoral neck fracture (n = 8, 24%) or base of femoral neck fracture (n = 3, 9%). The initial internal fixation procedure consisted of the implantation of a dynamic nail (n = 23, 70%), screw plate (n = 4, 12%) or cannulated screw (n = 6, 18%) The mean follow-up was 44 months (2-83 months). 7 patients died and 0 were lost to follow-up.

There were 6 intraoperative femur fractures: one metaphysis and diaphysis junction fracture required plate fixation and 5 greater trochanter fractures required wire cerclage. Two early postoperative complications required surgical revision: one dislocation and one infection. The dislocation occurred early on after a fall and was considered post-traumatic. The overall dislocation rate was 3% and there were no cases of aseptic loosening. The PMA and HHS scores significantly improved between the preoperative period and the latest follow-up visit:

	Preoperative	Follow-up	P value
PMA Score	6.3 ± 2.8 [3-15]	14.8 ± 2.6 [9-18]	(p < 0.001)
HHS Score	30.27 ± 15.7 [5-7]	80 ± 13.8 [50-100]	(p < 0.001)

References

1. Dual Mobility Constructs in Primary and Revision Total Hip Arthroplasty: A Systematic Review of Comparative Studies. Reina N, Pareek A, Krych A, Pagnano MW, et al. The Journal of Arthroplasty 34 (2019) 594e603
2. Dual mobility cups in total hip arthroplasty after failed internal fixation of proximal femoral fractures Boulat S, Neri T, Boyer B, Philippot R, Farizon F Orthop Traumatol Surg Res. 2019 May;105(3):491-495

The third-party trademarks used herein are the trademarks of their respective owners.



Johnson & Johnson Medical Limited Baird House, 4 Lower Gilmore Bank, Edinburgh, EH3 9QP.
Incorporated and registered in Scotland under company number SC132162.

Distributed by:

DePuy Orthopaedics, Inc.

700 Orthopaedic Drive
Warsaw, IN 46582
USA

Tel: +1 (800) 366 8143

Fax: +1 (574) 669 2530

DePuy (Ireland)

Loughbeg
Ringaskiddy
Co. Cork

Ireland

Tel: +353 21 4914 000

Fax: +353 21 4914 199

Manufactured by:



85 avenue des Bruyères
69150 Décines
Charpieu
France

Tel: +33 (0)472 05 60 10

Fax: +33 (0)472 02 19 18

www.jnjmedicaldevices.com