

Bikini incision direct anterior approach (DAA) THA with POLARSTEM[◇] or CPCS[◇] stems, OXINIUM[◇] and R3[◇] demonstrates low complication rates, excellent mid-term survival and improved PROMs

+ Plus points

Low complication rate compared with other DAA THA studies



3.9 years >99.5% survivorship for stem/acetabular components at mean follow-up



Post-operative improvement in HHS and WOMAC score



Overview

- Retrospective analysis of bikini incision DAA THAs, wherein a horizontal incision is made over the lateral groin crease, performed on a standard operating table by a single surgeon between May 2013 and December 2019
- POLARSTEM cementless stems (n=642) or CPCS cemented stems (n=223), with OXINIUM femoral heads and R3 acetabular components were used
- The primary outcome was complication rate and secondary outcomes included implant survivorship, Harris Hip Score (HHS) and Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score

Results

- Mean length of surgery was 71 minutes (range: 45–98 minutes) and mean duration of hospital stay was 1.6 days (range: 1–4 days)
- After a mean follow-up of 3.9 years (range: 0.9–6.8 years), complication rates were in line with or lower than those reported in the literature for DAA THA (Table)
- Survival of stem and acetabular component at a minimum of 2 years follow-up (mean: 3.9 years) were 99.5% and 99.8% respectively (n=652)
- Average pre-operative HHS and WOMAC score improved from 53.0 to 92.5, and from 49.0 to 3.5, respectively, at final follow-up

Table. Incidence of complications in this retrospective analysis of bikini incision DAA and the published DAA THA literature

Complication	Current study, % (n)	Published DAA THA literature, %
Superficial wound infection	0.35 (3)	0.3–4.0
Deep wound infection	0.23 (2)	0.3–0.8
Dislocation	0.23 (2)	0.3–2.7
Calcar fracture	0.35 (3)	0.3–1.5
Stem subsidence	0.35 (3)	0.2–0.7
Trochanteric fracture	0.35 (3)	2.3
Femoral fracture	0.47 (4)	0.12–0.45
Leg length discrepancy	0.23 (2)	0.2
Deep vein thrombosis	0.35 (3)	0.8–1.35
Permanent neuropraxia	0.35 (3)	1.2–11.0
Transient neuropraxia	6.4 (55)	15.0–81.0
Canal perforation	0	0.8–9.0
Trochanteric bursitis	1.1 (8)	6.1

Conclusions

Bikini incision DAA THA surgery with POLARSTEM or CPCS stems, OXINIUM and R3 resulted in low complication rates, excellent mid-term survival of the components and post-operative improvements in patient reported outcomes.

Citation

*Alva A, Nizam I, Gogos S. Minimizing complications in bikini incision direct anterior approach total hip arthroplasty: A single surgeon series of 865 cases. *J Exp Orthop*. 2021;8(1):1.

Available at: [Journal of Experimental Orthopaedics](https://doi.org/10.1186/s13047-021-00421-1) 