✚ Evidence in focus

Arthroplasty registry analysis: UK NJR bespoke report POLAR3

Smith+Nephew

POLAR3◊ Total Hip Solution delivers excellent performance with high survivorship at 8 years

✚ Plus points

8 years 98% survivorship[1]

35% Significantly lower **revision risk** compared to all other cementless stems (p<0.001)[1]

Significantly higher patient satisfaction and better PROMs compared to class average for cementless stems (p<0.001)[1]

Overview

- Bespoke implant report produced by the UK NJR summarising usage and outcomes associated with the combination of POLARSTEM◊, OXINIUM◊ head, highly cross-linked polyethylene (XLPE) bearing and R3◊ cup (POLAR3)[1]
- The analysis is based on data collected by the NJR and PROMs data collected by NHS Digital[1†]
- POLAR3 usage between July 2008 and June 2019:[1]
  - 9,952 total hip replacements (THR)
  - 9,130 total patients
  - 277 implanting surgeons at 74 centres

Results

- Registry data shows that POLAR3:
  - Demonstrated a significantly lower revision rate compared to all cementless stems at 8 years (2.0% vs 3.0%, p<0.001; Figure)
  - Provided a 35% lower revision risk compared to all cementless stems (p<0.001)[1]
  - Was associated with significantly fewer revisions due to unexplained pain, aseptic loosening of the stem and socket malalignment compared to all cementless stems (p<0.05)[1]
  - Delivered significantly higher patient satisfaction and improvements in PROMs compared to the class average for cementless stems (p<0.001)[1]

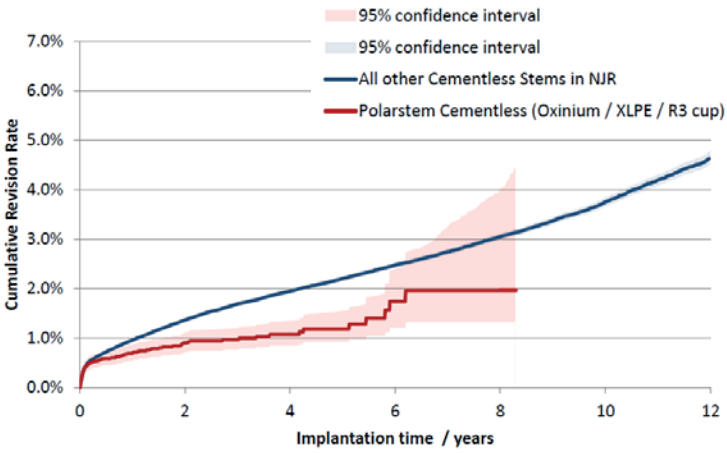

Figure. Cumulative revision rate of POLAR3 (POLARSTEM, OXINIUM/XLPE, R3) compared to all other cementless stems in NJR, with endpoint as any revision. All reasons for revision, excluding metal-on-metal

Conclusion

POLAR3 delivers excellent mid-term survivorship with low revision rates in the UK NJR. It also delivers significantly higher patient satisfaction and improvements in PROMs compared to the class average for cementless stems in THR patients.[1]

†The data used for this analysis was obtained from the NJR Supplier Feedback System. The Healthcare Quality Improvement Partnership ("HQIP") and/or the National Joint Registry ("NJR") take no responsibility for the accuracy, currency, reliability and correctness of any data used or referred to in this report, nor for the accuracy, currency, reliability and correctness of links or references to other information sources and disclaims all warranties in relation to such data, links and references to the maximum extent permitted by legislation.

The unique design features of POLARSTEM◊, OXINIUM◊/XLPE and R3◊ may translate into the clinical benefits reported in the UK registry

POLARSTEM

cementless stem system

19 years
of clinical heritage
10A* ODEP rating[2]

Unique design

The triple taper, self-locking POLARSTEM has been designed with a reinforced proximal body to help achieve excellent proximal stability[3-5]

The shortened stem length and narrow distal tip is designed to allow for ease of implantation through any surgical approach[6,7]

Advanced coating

The stem design incorporates the advanced surface roughness of titanium plasma spray with a hydroxyapatite coating

OXINIUM

with XLPE (VERILAST◊ technology)

19 years
of clinical heritage

Excellent wear performance

Exclusive combination of OXINIUM and XLPE delivers excellent long-term wear performance, confirmed in multiple registries, and has the lowest revision rate of all bearings at 15 years[8-10]

Low levels of taper corrosion

Substantially lower levels of taper corrosion compared to metal femoral heads[11,12]

Biocompatibility

Contains very low levels of nickel, cobalt and chromium compared to cobalt chromium implants[13,14]

R3

Acetabular System

13 years
of clinical heritage
10A* ODEP rating[2]

STIKTITE◊ stability

When compared with more traditional porous coatings, STIKTITE coating has greater porosity providing a higher coefficient of friction for an immediate 'scratch-fit' feel and the potential for better initial implant fixation[15,16]

Improved initial fixation limits micromotion, potentially enhancing bony ingrowth[17]

References

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