✚ Evidence in focus

Arthoplasty register analysis: AOANJRR automated industry report CPCS+OXINIUM/XLPE+R3

Smith+Nephew

Collarless Polished Cemented Stems (CPCS) combined with OXINIUM◊/XLPE (VERILAST◊ Technology) and R3◊ acetabular cup delivers reliable performance at 10 years

✚ Plus points

10 years
CPCS+OXINIUM/ XLPE+R3 Survivorship comparable to conventional THR[1]

10A*
ODEP rating for CPCS[2]

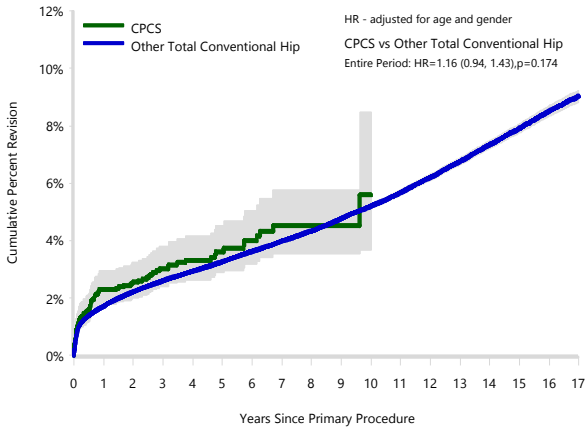
10A*
ODEP rating for R3[2]

Overview

- An automated industry report prepared by the Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) summarises usage and outcomes of CPCS combined with OXINIUM/XLPE bearing and R3 cup compared to all other conventional total hip replacements (THR), based on data collected by the AOANJRR†
- CPCS+OXINIUM/XLPE+R3 combination recorded usage between January 2008 and July 2019[1]
  - 2,717 total procedures
  - 2,504 total patients
  - 149 implanting surgeons at 112 centres

Results

- Cumulative percent revision of CPCS+OXINIUM/XLPE+R3 combination is similar to conventional THR in the AOANJRR (Figure)[1]



Number at Risk	0 Yr	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs
CPCS	2717	2243	1837	1482	1174	872	635	425	284
Other Total Conventional Hip	459862	411967	367183	324803	284423	246881	212057	180196	151377
Number at Risk	**9 Yrs**	**10 Yrs**	**11 Yrs**	**12 Yrs**	**13 Yrs**	**14 Yrs**	**15 Yrs**	**16 Yrs**	**17 Yrs**
CPCS	158	65	11	0	0	0	0	0	0
Other Total Conventional Hip	125311	102254	83097	66968	52986	40541	29076	19073	10719

Note: Procedures using metal/metal prostheses with head size larger than 32mm are excluded from the comparator

Figure. Cumulative percent revision of primary total conventional hip replacement by model (all diagnoses)

Conclusion

CPCS+OXINIUM/XLPE+R3 demonstrates 10-year survivorship comparable to conventional THR.

†AOANJRR is confident in the accuracy of the data included in this report, at the time it was provided. However, it was generated using an automated reporting system and has not been reviewed by the AOANJRR personnel.

CPCS

Cemented Hip System

16 years
of clinical heritage
10A* ODEP rating

Triple-taper design

Trapezoidal stem designed to reduce stresses on the cement mantle,[3] as well as reduce subsidence[4]

Improved range of motion and stability

Accurate restoration of joint anatomy with standard and high offset options in every size, while the circulotrapezoidal neck provides an optimised head-to-neck ratio to improve range of motion and stability[5,6]

OXINIUM◊

with XLPE

15 years
of clinical heritage

Excellent wear performance

Exclusive combination of OXINIUM and highly cross-linked polyethylene (XLPE) has excellent wear performance in laboratory studies, clinical studies and registries[7-10]

Low levels of taper corrosion

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

Biocompatibility

Contains lower levels of nickel, cobalt and chromium compared to cobalt chromium molybdenum implants[13,14]

R3◊

Acetabular System

15 years
of clinical heritage
10A* ODEP rating

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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