


+ Evidence in focus

Publication summary: Mergenthaler G, et al. ESSKA (2020)*


Smith+Nephew

Use of NAVIO[◇] Surgical System for unicompartmental knee arthroplasty (UKA) resulted in a significantly reduced total revision rate compared with conventional UKA at short-term follow up


+ Plus points



Significantly lower revision rate with NAVIO UKA compared to conventional UKA ($p=0.014$)



No specific complications related to the use of NAVIO UKA (no soft tissue or bone lesions and no complication related to the use of navigation pins)



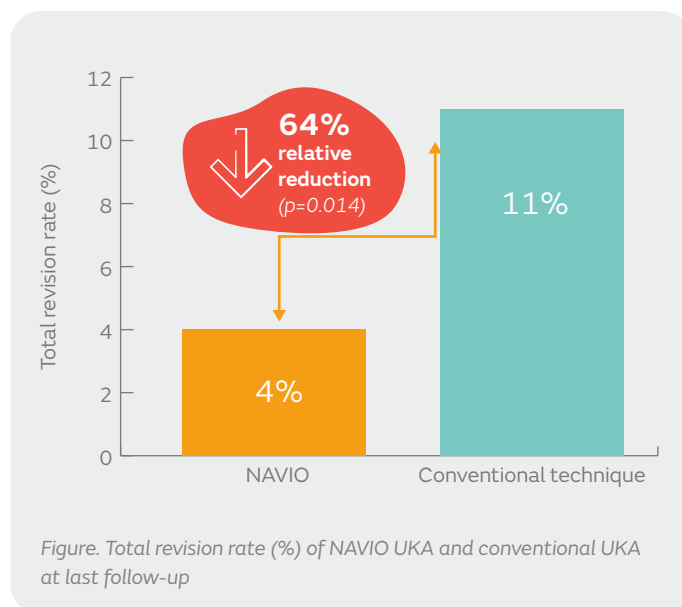
Significantly increased Functional Knee Society Score (KSS) with NAVIO UKA compared to conventional UKA at last follow-up (≥ 1 year; $p=0.01$)

Overview

- Single centre, retrospective study performed between January 2013 and December 2018 comparing the use of NAVIO UKA and conventional UKA
 - 200 NAVIO UKAs (mean age, 66.7 years)
 - 191 conventional UKAs (mean age, 67.1 years)
 - Mean follow-up was 22.5 months for NAVIO UKA and 30.2 months for conventional UKA ($p<0.001$)
- Data were collected preoperatively and at 2, 6, 12 months and at last follow-up
 - Revisions, intraoperative and postoperative complications, functional and radiological results were collected

Results

- NAVIO UKA had a significantly reduced total revision rate compared to conventional UKA at last follow-up (4 vs 11%, $p=0.014$; Figure)
 - Revision due to malalignment was significantly lower with NAVIO UKA compared to conventional UKA (0 vs 5.2%, $p=0.002$)
- No specific complications associated with use of NAVIO, in particular, no issues due to the use of navigation pins
- Total reoperation rate (without implant removal) was reduced with NAVIO UKA compared to conventional UKA at last follow-up (6.5 vs 9.4%)
- At the last follow-up, KSS functional score was significantly higher with NAVIO UKA compared to conventional UKA (92.8 vs 88.4, $p=0.01$)
- No significant difference in duration of surgery (NAVIO UKA, 81 min; conventional UKA, 76 min)



Conclusions

NAVIO Surgical System demonstrates a significantly lower revision rate for UKA than conventional methods, and is not associated with any robotic specific complications at the short-term follow up.

Citation

*Mergenthaler G, Batailler C, Lording T, et al. Is robotic-assisted unicompartmental knee arthroplasty a safe procedure? A case control study. ESSKA. 2020. [Epub ahead of print]
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