Kantonsspital St.Gallen

No difference in joint awareness after TKA: a matched-pair analysis of a classic implant and its evolutional design

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PURPOSE
Total knee arthroplasty (TKA) designs continuously evolve with the aim of improving patient outcomes. The purpose of the current study was to compare clinical and patient-reported outcome (PRO) results of a new TKA implant to its predecessor. The hypothesis of this study was that joint awareness and range of motion (ROM) of the newer design would be better than the classic design.

METHODS
One hundred patients undergoing TKA using the newer design (Attune) were matched by age and gender to 200 patients with the classic design (LCS). All patients underwent computer-navigated (Vector Vision, Brain-Lab, Germany) primary TKA by the same surgeon using the same technique. Data (FJS-12, WOMAC and ROM) were collected preoperatively and at 12 months follow-up at our implant registry.

RESULTS
Compared to preoperative scores, FJS-12, WOMAC and ROM improved significantly at 12 months follow-up. In the Attune group, mean FJS-12 and WOMAC at follow-up were 67.6 (SD 27.8) and 14.8 (SD 14.9) respectively, compared to 70.8 (SD 33.8) and 15 (SD 17.9) in the LCS group. Mean postoperative ROM was similar in both groups (Attune 120°, range 90°-140°, SD 10.4 and LCS 120°, range 85°-140°, SD 10.3).

CONCLUSION
The newer TKA and the predecessor design achieved comparable joint awareness, WOMAC scores and ROM at 1-year follow-up. The benefits expected of the newer design could not be observed in early clinical and PROs. The clinical relevance of this study is that it questions the importance of implant design as the single most important factor for patient outcomes.

LEVEL OF EVIDENCE
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