

Outcome of the Attune Total Knee Arthroplasty. Comparison of Anatomic and Asymmetric Patellar Implants

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Introduction:

Implant design is known to affect patellar kinematics, contact mechanics and ultimately, the outcome of total knee Arthroplasty (TKA). The aim of this study was to compare the patient reported outcomes of total knee arthroplasty with either a ‘anatomic’ or ‘asymmetric’ patellar component .

Methods:

A consecutive series of 50 subjects who had TKA using an “anatomic” patella insert between September 2016 and August 2017 formed the “Anatomic Group”. A consecutive series of 50 subjects who had TKA using an “asymmetric” patella insert between December 2015 and September 2016 formed the “Asymmetric Group”. All subjects completed standardized patient reported outcome measures (PROMs) before TKA, and at 6 and 12 months after TKA. PROMs included EQ5D as a general health

measure, Knee injury and Osteoarthritis Outcome Score (KOOS) as a disease specific measure, and patient satisfaction. PROMs between groups were compared at 6 and 12 months.

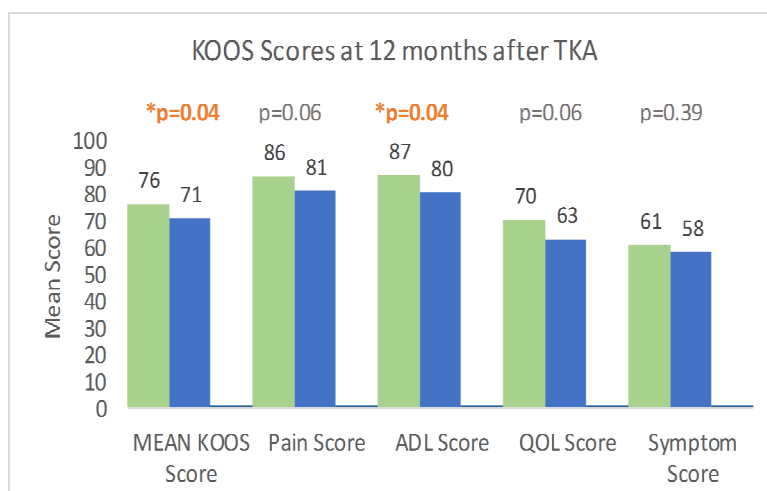
Results:

There were 50 subjects in each group. There were no significant difference between the groups for baseline characteristics of gender (P=0.836), BMI (p=0.63), age (p=0.230), or EQ5D scores.

PROMS scores were completed by 98 subjects before surgery, 94 at 6 months and 100 at 12 months. There was no difference between the groups for baseline KOOS scores.

Baseline Mean KOOS	ANA	ASY	P
Pain Score	47	46	0.654
Symptom Score	44	50	0.112
QoL Score	28	25	0.268
Function Score	54	49	0.232
Mean KOOS Score	43	42	0.699

At 12 months the “Anatomic Group” had significantly higher overall **mean KOOS Score** (p=0.04) and **KOOS Function Score** (p=0.04) scores, compared to the Asymmetric Group. The mean difference was 5.5 on KOOS overall score and 7.3 points on Function score. See Figure 1.



Being **satisfied or very satisfied** with the outcome of surgery at 12 months was reported by 98% in the “Anatomic Group” and 82% in the “Asymmetric Group” (p=0.009)

Conclusions:

TKA using an “anatomic” patellar insert had superior 12 month results over “asymmetric” patellar insert for the outcomes of patient satisfaction, mean KOOS scores, and KOOS function score. There was also a trend (p=0.06) towards superior Quality of Life and Pain scores in the “Anatomic Group” over the “Asymmetric Group”.



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