

## Clinical Outcome Of Total Knee Replacement Using Advance®Medial Pivot Knee System

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### INTRODUCTION:

Total knee replacement (TKR) is commonly done orthopaedic procedure to treat knee pain and improve functional activities of patients suffering from osteoarthritis. The ideal TKR implant should substitute the normal kinematic of the human knee. The ADVANCE®Medial Pivot Knee System (AMP) is designed as such to reproduce the rotational and translational kinematics of the normal knee which increases the stability of the knee during flexion movement. The purpose of this study is to evaluate the post-operative clinical outcome of patients who underwent TKR using this system.

### MATERIALS & METHODS:

Total of forty four (44) patients (43 knees) were operated (TKR) in our centre in the year of 2017 (from 01-01-2017 till 31-12-2017) using AMP by a single surgeon using standard anterior midline approach and medial para-patellar exposure of the joint. In all cases, the posterior cruciate ligament (PCL) resected during operation. Post-operatively, Oxford knee score and active flexion of the knee were used to evaluate the clinical outcome of all patients.

Parameters	Male	Female
No of patients	11	32
No of knees	11	33
Age, mean (range)	61.09 years (39-77)	62.38 years (48-76)

Figure 1: Demographic data.

### RESULTS:

Post-operatively majority of the patient showed satisfactory joint function based on the mean oxford knee score of 39.98. Most of the patient able to perform age related activities without much complains post-surgery. The mean active flexion of the operated knee of 102° noted during our clinic follow up.

Score	Male	Female	TOTAL
Oxford knee score, mean	40.4	39.8	39.98
Active flexion of the knee, mean (range)	105.5° (100° - 120°)	100.9° (90°-120°)	102° (90°-120°)

Figure 2: Score of patients

### DISCUSSIONS:

In our study we investigated and recorded post-operative outcome using AMP and we observed good clinical outcome. Karachalios et al. [1] also presented satisfactory outcome of 284 knees using this AMP after a mean of seven years follow up. Another study done by George A.Macheras et al. [2] documented that no instability noted in all 347 operated knees. However further study with larger number of patients, comparison with pre-operative joint function and long term follow up is indicated to analyze the AMP in detail.

### CONCLUSION:

Based on our study, the results showed good clinical outcome post TKR using AMP.

### REFERENCES:

1. T. Karachalios et al. A mid-term clinical outcome study of the AMP knee arthroplasty Knee, 16 (2009), pp. 484-488
2. George A.Macheras et al. A long term clinical outcome of the Medial Pivot Knee Arthroplasty System, Knee 22 (2017), pp 447-453