

OUTCOME OF PROXIMAL FIBULA OSTEOTOMY IN MEDIAL COMPARTMENT KNEE OSTEOARTHRITIS

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INTRODUCTION:

Total knee replacement, unicompartmental knee replacement and high tibial osteotomy is a standard surgical intervention for medial compartment knee osteoarthritis. Implant longevity is a concern in younger population, and high tibial osteotomy carries significant complication. Proximal fibular osteotomy (PFO) has recently been proposed to treat medial knee osteoarthritis with promising result and lesser complication.

METHODS:

30 samples were included into control and intervention arm respectively. Clinic counselling pre-op, 2-week,6-week,3-month,6-month and 12-month post-intervention were carried out to evaluate clinical, functional and radiological parameters during each visit. Intra-operative, 2cm of the fibula bone,6-8cm from the tip of fibula were removed and post-operative immediate mobilization allowed for every subjects. Clinical and functional parameters were assessed using Visual Analog Score (VAS), Knee Society score (KSS) and Oxford Knee Score (OKS). Radiological assessment of medial and lateral joint gap was taken from standing knee x ray at each time interval.

RESULTS:

The mean age is 56.38 (range from 40-70 years), 68.3% (n=41) were female, mean body mass index (BMI) of 28.12 (range 18-

56) and left side involvement is 60% (n=36) with 95% diagnosed with grade 2 according to Kellgren Lawrence grading. Following PFO, there was significant improvement of VAS score, OKS score and clinical and functional KSS score (p<0.05). Radiologically, medial joint gap significantly improved at 2-week and 6-week post-op (P<0.05), whereby, lateral joint gap shows increment at all time post operatively (p<0.05).

DISCUSSIONS:

parameters are attributed by multiple hypothesis with most plausible theory being distal migration of proximal fibula from pulling of peroneus and soleus and transmit the tensile force from proximal fibula to lateral condyle of femur that in turn creates a competition with the bicep femoris and generates tension in the lateral knee leading to lateral joint space narrowing and improvement of symptoms and function.

CONCLUSION:

PFO showed improvement in VAS, OKS, clinical and functional KSS, medial and lateral joint gap and could be a viable option in treating medial knee osteoarthritis.

REFERENCES:

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2. Utomo et. Al. *Journal of Orthopaedics*, 15(3), 858–8.