ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 04 | April - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

THE STUDY OF HIGH TIBIAL OSTEOTOMY IN EARLY OSTEOARTHRITIS OF KNEE

Orthopaedics

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KEYWORDS

INTRODUCTION

It is a common, debilitating disease which is associated with a large social and economic burden, in addition to the physical and psychological sequelae it often manifests in the affected individual. The OA of knee is more common in women, with female-to-male ratios varying between 1.5:1 and 4:1. With the continued aging of the population and the alarming obesity epidemic, the prevalence of OA is expected to increase by 40% by 2025.[1]

Management of osteoarthritis of knee may be non-surgical and surgical.

Non-surgical management may be-

a) Non Pharmacological such as weight reduction, change in lifestyle.[2,3]

b) Pharmacological methods such as: NSAIDs especially Acetaminophen.[3]

Surgical management :

a) High Tibial Osteotomy.
b) Proximal Fibular Osteotomy.
c) Unicompartmental Knee Arthroplast.
d) Total Knee Arthroplasty.

MATERIAL AND METHOD

This study was a Longitudinal experimental study, single centered it was include Patients visiting the Outpatient department of Tertiary Care Centre in department of Orthopedics with complaints of knee pain were subjected to weight bearing x-ray of both knees ap/lateral. Patients who are found to have isolated medial compartment osteo-arthritis was included in the study. 100 patients were posted for high tibial osteotomy.

Inclusion criteria includes

1. Patients with moderate to severe symptomatic medial compartment OA of the knee, who are able to give informed consent for the surgery.
2. Patients in whom conservative management has failed and
3. Who have radiographic evidence of significant varus.

Exclusion criteria

1. Posttraumatic knee OA
2. Inflammatory joint disease
3. Patients with a history of previous operation or fractures.
4. Tricompartmental OA of knee

OBSERVATION AND RESULTS

In our study, majority of patients belonged to the age range of 51 to 60years with mean age being 61.3±8.65years.

In our study, majority of patients were in the age range of 51-60years in which 55% were female.

The table shows that there was highly statistically significant decrease in VAS at the postoperative assessment than preoperative assessment with p-value < 0.001 while there was highly statistically decrease in WOMAC and radiological angle conversion from varus to valgus postoperative assessment than preoperative assessment with p-value < 0.001 and < 0.001 respectively.

DISCUSSION

Our study included 100 patients in dept of orthopaedics in a tertiary care centre (41 males and 59 females) were subjected to HTO with the main aim to assess the efficacy in improving the knee pain and varus deformity.

Medial opening wedge osteotomy stabilized by Limb Reconstruction system (LRS) was the technique used and a follow up of 9 months was done.[4,5,6,7]

This technique has got various advantages such as being minimally invasive, no need of fibular osteotomy, minimal risk of nerve damage and subtle corrections by continuous opening of osteotomy

Preop varus deformity was 8-10 degrees (50%). Our aim was to achieve postop mechanical axis of 6-8 degree valgus with Fujisawa point as reference.

We could achieve 5-7 degree valgus in 60% of the cases. Pain was the main criteria for performing this procedure and 100% of patients had moderate to severe pain preoperatively.

Only 4 patients had some decrease in range of motion postoperative (15-20degree).

Comparison between various studies

In our study we used womac score , and mean pre operative womac score was 82.38 and mean post operative score at 9 Month follow up was 38.43(p value <0.001) which is statistically significant, the preroperative vas was 7.83 and post operative vas 2.78 and radiographic valgus angle pre operatively was 7.54 degrees of varus to postoperative valgus of 1.9 degrees. However Al-Azhar University used knee society score and visual analogue score and Mean KSS at final follow-up was 85.40+/-5.62significantly higher than the mean preoperative score of 58.70+/-4.74 (P<.001). Mean VAS score preoperatively was 7.8+/- 0.79 and post operatively was 4.2+/- 1.14 which significant (p value= <0.001). and radiographic valgus 2.59+/-0.68 to 3.35+/-0.67 (p value<0.001)

CONCLUSION

HTO is the surgery of choice in medial compartment OA associated with high degree of genu varus.

From the above study, it is quite clear that Open wedge Osteotomy using Limb Reconstruction System is an effective method of managing OA knee especially in younger patients with Unicompartmental Knee involvement.

It is minimally invasive, requires no fibular osteotomy, minimal chances of nerve injury, easy to perform and no internal hardware used

requiring subsequent removal We strongly recommend this procedure in relatively younger patients as it may delay the need of joint replacement and in some cases it may actually avoid it.

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