Medial Opening Wedge High Tibial Osteotomy, a retrospective review of patient outcomes over 10 years

Fotios P. Tjoumakaris, MD; Nick Lombardi, BS; Bradford S. Tucker, MD; Matthew D. Pepe, MD

Rothman Institute, Thomas Jefferson University, Department of Orthopaedic Surgery, Egg Harbor Township, NJ
Disclosures

- F. Tjoumakaris – none
- B. Tucker – Mitek, DePuy ©
- M. Pepe – none
- N. Lombardi - none
Introduction

- High tibial osteotomy (HTO) has become a well-established treatment for unicompartmental osteoarthritis of the knee.

- Over the last 30 years, various techniques have been introduced to improve outcomes and reduce morbidity.
The primary **purpose** of this study was to review the outcomes of patients who received medial opening wedge HTO over a ten year period (2002-2012) using a modern, low profile, medially based fixation device.
In addition, we sought to determine if obese patients (BMI >30) had a less favorable outcome than their non-obese counterparts.
Ninety-one patients were identified from a surgical database as having undergone an HTO for medial compartment osteoarthritis of the knee with varus mal-alignment.
Methods

- All procedures were performed by one of two fellowship trained orthopedic surgeons from 2002-2012 utilizing a low profile fixation device and an identical surgical technique.

- Minimum follow-up was one year for inclusion in the study.
Methods

- Outcomes were measured using Lysholm and WOMAC scores.
- Radiographs were evaluated to determine delayed union or non-union at the osteotomy site.
- Surveillance was undertaken to evaluate post operative complications.
Results

- 62/91 (68%) patients were available for follow-up and are included in this analysis.
  - Males: 43; Females: 18
  - Mean Age: 45 years old (14-65)
  - Mean Follow-up: 4 years (1.4-11.4)
Results

Lysholm

- Unknown BMI
- BMI <30
- BMI >30
- All
* A higher score indicates greater disability
Results

Pre-Op

6 Months Post-Op
Results

Complications:
- 3 – arthrofibrosis (requiring LOA)
- 2 - infection
- 1 – delayed union
Results

At final follow-up, 18 patients received additional treatment on the affected knee:

- 11 – removal of hardwared
- 5 - viscosupplementation
- 2 – total knee replacement
Conclusions

- Low profile, medial based devices used in the setting of HTO is an accepted treatment for unicompartmental osteoarthritis of the knee.
Conclusions

- At final follow-up, a majority of patients reported positive outcomes and few complications.

- 18 patients required additional treatment for osteoarthritis
Conclusions

- In our analysis, obese patients faired equally as well as their non-obese counterparts, with no significant difference in outcomes scores or complication rates.
Conclusions

- Survivorship of high tibial osteotomy was excellent in this series, with only 2 patients having undergone total knee replacement at final follow-up.
Thank you