Phalangeal Osteotomy…To Perform or Not to Perform? Changes in Functional Outcomes of Patients with Moderate to Severe Hallux Rigidus Undergoing Cheilectomy

Monique C. Chambers, MD, MSL; Dukens LaBaze, BS; MaCalus V. Hogan, MD
University of Pittsburgh Medical Center, Pittsburgh, PA

**BACKGROUND**
- Degenerative process of MTP arthritis results in formation of osseous and cartilaginous structures
- Dorsal bone spurs may develop leading to pain with great toe dorsiflexion
- Cheilectomy alone has been shown to have a high failure rate and progress to advanced disease
- Phalangeal dorsiflexion osteotomy has become increasingly more popular amongst foot and ankle surgeons with the hopes of decreasing failure rate and improving early outcomes

**STUDY POPULATION**
- 18 patients met inclusion criteria
- 8 underwent cheilectomy; 10 had a cheilectomy with osteotomy
- Average age of cohort was 51.9
- Females 13 (73) ; Males 5 (27%)

**RESULTS**
- Patients who underwent cheilectomy with osteotomy had better outcomes across all outcome measure scores
- Cheilectomy with osteotomy patients showed significantly higher patient report outcome scores compared to cheilectomy alone patients
- VAS scores and FAAM scores showed no statistically significant difference between the two cohorts
- 50% of patients who received cheilectomy alone reported more pain post-operatively

**METHODS**
- Level III retrospective review
- Inclusion criteria
  - Diagnosis of MTP arthritis
  - Surgical intervention from July 2015 - November 2016
  - Cheilectomy or Cheilectomy with phalangeal osteotomy
- 385 patients
- Collected patient reported outcomes (PROs)
  - SF12M
  - SF12P
  - FAAM
  - VAS
- Inclusion of completed PROs

**CONCLUSION**
Phalangeal osteotomy, in conjunction with cheilectomy, demonstrates improved functional outcomes for patients with moderate to severe hallux rigidus compared to cheilectomy alone. Larger cohort studies with long term follow up are needed to support these results.

**REFERENCES**
- http://userfiles.steadyhealth.com/userfiles/11361/articles/cheilectomy.jpg
- http://userfiles.steadyhealth.com/userfiles/11361/articles/cheilectomy.jpg

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Isolated Cheilectomy</th>
<th>Cheilectomy w/ Osteotomy</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-op SF-12M</td>
<td>36</td>
<td>56</td>
<td>0.033</td>
</tr>
<tr>
<td>Post-op SF-12P</td>
<td>30</td>
<td>52</td>
<td>0.009</td>
</tr>
<tr>
<td>Pre-op/post-op ∆VAS</td>
<td>-1</td>
<td>-3.889</td>
<td>***</td>
</tr>
<tr>
<td>Pre-op/post-op ∆FAAM</td>
<td>-1.51 %</td>
<td>10.93</td>
<td>***</td>
</tr>
<tr>
<td>% Patients w/ worse pain</td>
<td>50%</td>
<td>0%</td>
<td>***</td>
</tr>
</tbody>
</table>