EXTRA-ARTICULAR OSTEOTOMY FOR MALUNITED UNICONDYLAR FRACTURES DONE WITH CONICAL BURS

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INTRODUCTION
Although unicondylar fractures of the head of the proximal phalanx are uncommon injuries, they can result in substantial disability if anatomic alignment is not maintained.

PURPOSE
To evaluate the use of conical burs rather than oscillating saw to make an extra-articular osteotomy in the treatment of malunited unicondylar fractures of the phalanx.

METHODS
An extra-articular osteotomy was done with conical burs to correct the deformity resulting from malunion of a unicondylar fracture of the phalanx. A closing wedge osteotomy that was stabilized with Kirschner wires accomplished realignment of the joint. We retrospectively reviewed the results of our technique in 4 patients, in each one we evaluated radiographic healing, correction of angulation, digital motion, postoperative complications, current level of pain, and overall satisfaction with the procedure.

RESULTS
All of the osteotomies healed without malunion, with an average angular correction of 14°. We found an improvement of proximal interphalangeal joint motion (x=0-76º) and total digital motion (x=150º). We didn’t found postoperative complications. The DASH score improved and at final follow-up all our patients had returned to pre-injury work and sports activities.

<table>
<thead>
<tr>
<th>Case</th>
<th>Age/sex</th>
<th>Phalanx Involved</th>
<th>Time from lesion to surgery (months)</th>
<th>Time from surgery to return daily life (months)</th>
<th>Preoperative assessment</th>
<th>Postoperative assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Angular Deformity (degrees)</td>
<td>DASH</td>
</tr>
<tr>
<td>1</td>
<td>17/Men</td>
<td>Proximal / 5th finger left</td>
<td>2</td>
<td>2</td>
<td>12º</td>
<td>34</td>
</tr>
<tr>
<td>2</td>
<td>45/Men</td>
<td>Proximal / 5th finger left</td>
<td>1.5</td>
<td>4</td>
<td>15º</td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>17/Women</td>
<td>Proximal / 5th finger right</td>
<td>16</td>
<td>3</td>
<td>20º</td>
<td>32</td>
</tr>
</tbody>
</table>

CONCLUSIONS
This method of extra-articular osteotomy with conical burs is highly reproducible, reduce the risk of soft tissues lesions, decrease the risk of adhesions, and leads to a correction and improvement of realignment of the joint.

BIBLIOGRAPHY: