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Gilles Dautel and Nicolas Pauchard declare a conflict of interest with Arthrex®. The other authors declared no potential conflicts of interest.

Preliminary results of the ScaphoLunate Intercarpal Ligamentoplasty for chronic scapholunate dissociation in a prospective study

INTRODUCTION

SLIC x Ligamentoplasty: ScaphoLunate & InterCarpal

Indication: Chronic Reducible Scapholunate Dissociation without arthritis (Garcia Eila Stages 3 and 4).

Palmis Longus

Dorsal ScaphoLunate Interoseous Ligament and Dorsal InterCarpal Ligament.

Rotatory Subluxation of Scaphoid and DIS Deformity.

RESULTS

- 20 Men, 6 Women.
- 17 Dominant Hand (65%).
- Mean Age: 40 years (22 - 57).
- 15 patients with heavy manual labor.
- Mean delay to surgery: 14 months (3.5 - 72).

Clinical and Functional Measurements

<table>
<thead>
<tr>
<th>Averages</th>
<th>Pre-operative</th>
<th>Post-operative</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAS pain</td>
<td>4.5</td>
<td>0.4</td>
<td>0.05</td>
</tr>
<tr>
<td>VAS load</td>
<td>6.7</td>
<td>1.9</td>
<td>0.05</td>
</tr>
<tr>
<td>Grip Strength (grip)</td>
<td>26 KgF</td>
<td>40 KgF</td>
<td>0.05</td>
</tr>
<tr>
<td>Flexion</td>
<td>59°</td>
<td>55°</td>
<td>0.05</td>
</tr>
<tr>
<td>Extension</td>
<td>56°</td>
<td>56°</td>
<td>0.05</td>
</tr>
<tr>
<td>Ulnar Deviation</td>
<td>32°</td>
<td>32°</td>
<td>0.05</td>
</tr>
<tr>
<td>Radial Deviation</td>
<td>16°</td>
<td>16°</td>
<td>0.05</td>
</tr>
<tr>
<td>DASH</td>
<td>57.5/100</td>
<td>17.5/100</td>
<td>0.05</td>
</tr>
<tr>
<td>PRWE</td>
<td>52.8/100</td>
<td>13.6/100</td>
<td>0.05</td>
</tr>
<tr>
<td>MNS</td>
<td>54/100</td>
<td>84/100</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Work stopping: 5 months (0 – 12)

Radiographic Measurements

<table>
<thead>
<tr>
<th>Averages</th>
<th>Pre-operative</th>
<th>Post-operative</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static Scapholunate Gap</td>
<td>3.2 mm</td>
<td>2.3 mm</td>
<td>0.05</td>
</tr>
<tr>
<td>Dynamic Scapholunate Gap</td>
<td>4.6 mm</td>
<td>3.0 mm</td>
<td>0.05</td>
</tr>
<tr>
<td>Scapholunate Angle</td>
<td>73°</td>
<td>62°</td>
<td>0.05</td>
</tr>
<tr>
<td>Rotatory Subluxation</td>
<td>15</td>
<td>4</td>
<td>g</td>
</tr>
<tr>
<td>Arthroscopy</td>
<td>0</td>
<td>0</td>
<td>g</td>
</tr>
</tbody>
</table>

Only Static instabilities (n=13)

- Static SLG = 2.2 mm (x = 4)
- Dynamic SLG = 3.5 mm (x = 5.3)
- SLG > 3.5 (x = 6+) (x = 4+)

CONCLUSION

- Significant improvement: Pain relief, Grip Strength, Functional Scores.
- Reduction in the range of motion which remains similar to pre-operative values.
- Reductions scapholunate dissociation (Posterior Scapholunate Subluxation+++).
- Role of Dorsal InterCarpal ligament.
- Insufficient follow-up: Middle and long term efficacy (ligament loosening, SLAC arthritis?).
- SLIC procedure: Scaphoid can be x easily x reduced during surgery (no criteria).
- SLIC 2.0

METHODS

- Prospective Study.
- 26 patients operated between March 2013 and September 2016.
- Inclusion: Symptomatic stages 3 and 4 (Garcia Eila classification).
- Preoperatively: Static and dynamic plain Radiographs, Co-ArthroScan.
- Pre- and Post-operative Evaluation:
- Clinical: VAS (rest and load pain), Grip Strength (grip), Range of motion, Functional Scores (DASH, PRWE, MNS).
- Radiological: ScaphoLunate Gap and Angles.

POST OPERATIVE FOLLOW-UP

- Mean Follow-up: 36 months (12 - 54).
- I early revision (3 months): scaphocapitate fusion
- Rapid recurrence of static dissociation before pin removal.
- Stage 5 Garcia Eila classification (non-reducible).
- Failure: excluded from our analysis of the results.

COMPLICATIONS

- Wound healing: 15 days
- Pins: 0
- Nonunion: 3 (11.5%)
- De Quervain (2), ECRB (1)
- 1st post-operative year, dorsal.
- Recurrent static instability: 4 (15%)