Ulnar Nerve Length and Instability After Osborne’s Modified Simple Decompression in Idiopathic Cubital Tunnel Syndrome

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Introduction & purpose

- Dr. Osborne modified conventional simple decompression (CSD) by sutureing the Osborne’s ligament beneath the ulnar nerve (1970).
- Modified Simple Decompression (MSD) is "CSD + Osborne’s ligament repair"
- Purpose
  1) Effect of the Repair on Ulnar Nerve Length
  2) Ulnar Nerve Instability between CSD vs MSD
  3) Clinical Outcome between CSD vs MSD

Methods

- Operation: CSD (n=20), MSD (n=28)
- Ulnar Nerve Length Check Intraoperatively.
- Ulnar Nerve Instability Check, 12 months, by Sonography
- Clinical Outcome Check 24 months.

Result (1)-Ulnar Nerve Length

<table>
<thead>
<tr>
<th></th>
<th>Preoperative Status</th>
<th>Postoperative Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 0 Instability</td>
<td>MSD (n=32)</td>
<td>CSD (n=20)</td>
</tr>
<tr>
<td>Grade 1 Instability</td>
<td>MSD (n=32)</td>
<td>CSD (n=20)</td>
</tr>
<tr>
<td>Grade 2 Instability</td>
<td>MSD (n=32)</td>
<td>CSD (n=20)</td>
</tr>
</tbody>
</table>

P=0.840

Ulnar Nerve Instability was decreased compared to CSD, postoperatively.

Result (2)-Ulnar Nerve Instability

- Quick DASH, Pinch, VAS, Mcgowan Stage, Wilson Krout Criteria
- No Difference at 24 months postoperative state.

Conclusions

- Ulnar Nerve Length in elbow flexion decreases after repair of the Osborne’s ligament.
- MSD provides a lower grade of Ulnar Nerve Instability compared to CSD
- No Different in Clinical Outcome

☞ Ulnar Nerve Length and Instability Can Be Reduced By Repairing Osborne’s Ligament after Simple Decompression.

Result (3)- Clinical Outcome

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Ulnar Nerve Length and Instability Can Be Reduced By Repairing Osborne’s Ligament after Simple Decompression.