**Introduction:** The most common peripheral neuropathy in upper extremities is caused by the idiopathic carpal tunnel syndrome (CTS). In Germany, if invasive decompression surgery is needed, it is usually performed with an open carpal tunnel release operation (OCTR) and not with endoscopic carpal tunnel release (ECTR). The ECTR is suspected to show a flat learning curve and to be technically more demanding than the OCTR. Worldwide, the one-portal technique by Agee has become a standard procedure in minimal invasive operations. We wanted to verify the learning curve and any early complications while establishing this technique in our clinic.

<table>
<thead>
<tr>
<th>OCTR approach</th>
<th>ECTR approach</th>
<th>Set Up ECTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>classical</td>
<td>mini open</td>
<td></td>
</tr>
</tbody>
</table>

**Methods:** From April to November 2017, in a pilot study, 52 patients with idiopathic CTS were operated in a single center by one surgeon using the one-portal ECTR-procedure. The operative time was measured, as well as any remaining hematoma (score: 0=none-5=revision necessary). The postoperative pain level was evaluated by using the VAS score (0-10). Regression of the typical CTS symptoms such as nocturnal numbness and pain (NMP) was also monitored.

**Surgical procedure by using the one-portal Endoscopic Carpal Tunnel Release System**

- **Defining the entrance to the carpal tunnel**
- **Visualization of the transverse carpal ligament**
- **Straightforward release by pull-blade technique**
- **Completing the release by cutting the distal margin**
- **Final control of the cut edges and intact median nerve**

**Results:** In the first 30 patients, greater variabilities in the operative time from 6 to 27 min. were recorded. In this period, 2 ECTR-procedures were converted into an open surgical approach (2 brown spikes), owing to unclear intraoperative conditions. In the first third of 52 patients (1-17), the average operative time was 11.8 min., in the second third (18-35) 8.0 min. and in the last third (36-52) 5.5 min. were needed. There was a trend to greater postoperative hematomas and pain in the first 2/3rd. of the patients. Operative revisions, due to complications like bulky hematoma, were not observed. There were no complications assessed, such as iatrogenic nerve or tendon injuries. By all patients, the NMP disappeared immediately post-operatively.

**Summary:** In the present study, at least 30 endoscopic operations were needed, to achieve a stable and representable process, in order to establish the one-portal ECTR-procedure. By all 52 patients that were included, no major complications or surgical revisions were observed. Thus, these results do not confirm the assumed prolonged learning process while establishing this endoscopic technique in our clinic.