Tarsal Tunnel Syndrome in Hemodialysis Patients

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My disclosure is in the Final Program Book.

I have no potential conflicts with this presentation.
Purpose

• Reports regarding tarsal tunnel syndrome (TTS) in hemodialysis patients are very rare.

• The purpose of our study is to evaluate the frequency of TTS and the problems with its pathology.
Patients and Methods

- **1,011 cases** undergoing maintenance hemodialysis from January 2000 to December 2006 at one hospital

- Mean age: 65.1 years old (19-98 years old)

- Male: 598 cases, Female: 413 cases

- Mean hemodialysis duration: 10.0 years (1-38 years)
We examined background, clinical symptoms, nerve conduction study, and intraoperative findings in TTS patients.
## Results

7 ankles of 5 cases were diagnosed as TTS.

| background | sex        | male: 3  
female: 2 |
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>57.8 years old (47-69)</td>
<td></td>
</tr>
<tr>
<td>hemodialysis duration</td>
<td>29.4 years (7-30)</td>
<td></td>
</tr>
</tbody>
</table>
| affected side | Rt: 4 ankles  
Lt: 3 ankles |
| clinical symptoms | night pain: 7 ankles |
| nerve conduction study | delay or undevelopment: 7 ankles |
intraoperative findings (3 ankles of 3 cases)

macroscopic findings
✓ Amyloidoma 3/3 ankles
✓ fragile deposits like nodular tumor 3/3 ankles
✓ proliferation of the synovial sheath 3/3 ankles
✓ thickening of joint capsules 3/3 ankles
✓ Thinning of flexor retinaculum 3/3 ankles
✓ concomitant ganglion 1/3 ankles

microscopic findings
✓ positive staining by β-2 MG 3/3 ankles
Case: 53 years-old male
dialysis duration 30 years

Around the posterior tibial tendon sheath, amyloidoma, fragile deposits like nodular tumor, and thickening of the joint capsules were recognized.

Histologically, the deposition of hyaline materials was recognized in all tissues, by staining to a pale red color using congo red stain. An immunohistochemical study indicated positive staining by β-2 MG staining.
## Discussions

### TTS in hemodialysis patients

<table>
<thead>
<tr>
<th>author</th>
<th>case</th>
<th>age</th>
<th>history of hemodialysis</th>
<th>causes</th>
<th>year</th>
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</thead>
<tbody>
<tr>
<td>Samoto N</td>
<td>1</td>
<td>55</td>
<td>18 years</td>
<td>amyloidoma</td>
<td>1992</td>
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<tr>
<td>Makinodan A</td>
<td>1</td>
<td>75</td>
<td>3 years</td>
<td>—</td>
<td>1998</td>
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<td>Sekiya H</td>
<td>1</td>
<td>64</td>
<td>23 years</td>
<td>amyloidoma</td>
<td>2006</td>
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<td>Özgür Ö</td>
<td>1</td>
<td>47</td>
<td>7 years</td>
<td>no lesion</td>
<td>2007</td>
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<tr>
<td>our study</td>
<td>5</td>
<td>57.8</td>
<td>7-30 years</td>
<td>amyloidoma</td>
<td>2012</td>
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</tbody>
</table>

- occurrence: 5 cases among 1,011 patients
- main pathology: amyloidoma
Conclusions

• We evaluated the frequency of TTS in hemodialysis patients and problems with its pathology.
• TTS developed in 5 cases among 1,011 cases of hemodialysis patients.
• Amyloidoma was the main pathology of TTS in hemodialysis patients.

References