**Diagnosis**

Neuropathic sensory symptoms did not accurately detect polyneuropathy in type 2 diabetes mellitus

**QUESTION:** How accurate are sensory symptoms for predicting polyneuropathy detected by clinical neurological examination in patients with type 2 diabetes mellitus?

**Design**
Blinded comparison of a neuropathic sensory symptom questionnaire with a clinical neurological examination.

**Setting**
26 general practices in the Netherlands.

**Patients**
588 patients (mean age 67 y, 53% women) with type 2 diabetes who received diabetes care in general practice. Patients were excluded if they received diabetes care in a hospital outpatient clinic or had other aetiological factors that might affect sensory functions of the skin of the lower extremities.

**Description of test and diagnostic standard**
Patients completed a 34 item diabetes symptom checklist that measured the physical and psychological symptoms related to type 2 diabetes; 10 items related to neuropathic sensory symptoms. The diagnostic standard was a clinical neurological examination done by a trained research clinician who was blinded to the results of the checklist. The total score on the clinical neurological examination could range between 0 and 25 and was the sum of scores determined by sensory modalities, ankle reflexes, and the anatomic level below which light touch sense was impaired; a total score > 4 implied a diagnosis of diabetic polyneuropathy.

**Main outcome measures**
Diagnostic test properties of a neuropathic sensory symptom questionnaire.

**Main results**
92% of patients had diabetic polyneuropathy detected by the clinical neurological examination. In univariate regression analyses, neuropathic symptoms associated with the clinical neurological examination were numbness of the feet (β = 0.35, p < 0.001), sensory alteration (β = 0.27, p < 0.001), and symptoms of pain (β = 0.16, p < 0.001). The table shows sensitivities, specificities, and likelihood ratios for daily symptoms of numbness of the feet in patients < 68 and ≥ 68 years of age.

**Conclusion**
Neuropathic sensory symptoms did not accurately detect polyneuropathy in patients with type 2 diabetes mellitus.

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**Test characteristics for daily symptoms of numbness of the feet for detecting diabetic polyneuropathy**

<table>
<thead>
<tr>
<th>Patient age</th>
<th>Sensitivity (95% CI)†</th>
<th>Specificity (95% CI)†</th>
<th>+LR</th>
<th>−LR</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 68 y</td>
<td>28% (13 to 44)</td>
<td>93% (87 to 97)</td>
<td>4.0</td>
<td>0.77</td>
</tr>
<tr>
<td>≥ 68 y</td>
<td>22% (9 to 37)</td>
<td>92% (85 to 97)</td>
<td>2.75</td>
<td>0.85</td>
</tr>
</tbody>
</table>

†Abbreviations defined in glossary; LRs calculated from data in article. CI provided by author.