A three-stage evaluation of the Spinal Nutrition Screening Tool (SNST) in patients with spinal cord injuries (SCI): Result from a UK multicentre study.

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Introduction
Appropriate identification and intervention could improve clinical outcomes by reducing the length of hospital stay, reducing the occurrence of complications, reducing mortality and improving quality of life and saving healthcare costs.

A disease specific nutrition screening tool - the Spinal Nutrition Screening Tool (SNST) is based on eight parameters screening (body mass index; age; level of spinal cord injury (SCI); presence of co-morbidities; skin conditions; diet; appetite and; ability to eat) has been developed for use in SCI but its reliability and agreement with other published tools requires investigation.

Aims
The aims of the study were to assessed the prevalence of malnutrition risk and diagnostic accuracy of the SNST

Study design
Prospective, cross-sectional, multicentre, validation study

Methods
On admission, the local investigator assessed baseline clinical data, anthropometric measurements and NST score, and blood biochemistry. The validity of SNST was assessed by (i) comparison with full dietetic assessment (criterion validity); (ii) comparison with a generic NST: Malnutrition Universal Screening Tool (2) (MUST) (concurrent validity); and (iii) completion of an additional SNST form was completed by the researcher dietitian to assess inter- and intra-rater reliability. The agreement was assessed using Cohen’s χ2-statistics

Results

<table>
<thead>
<tr>
<th>Centres</th>
<th>Number of patients</th>
<th>% screened</th>
<th>At risk of undernutrition (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>102</td>
<td>89.3</td>
<td>49.4 (45 / 91)</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>100</td>
<td>21.7 (5 / 23)</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>100</td>
<td>64.2 (9 / 14)</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>100</td>
<td>27.3 (3 / 11)</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>93.3</td>
<td>44.6 (62 / 139)</td>
</tr>
</tbody>
</table>

At risk of Undernutrition: SNST score ≥ 11

They had a significantly higher:
- CRP (28 mg/L v 16 mg/L P = 0.0008)
- medications (10 v 8.5 P = 0.026)

Conclusions
SNST is an acceptable (Valid and reliable) tool in identifying SCI patients at risk of malnutrition

Further investigation is warranted to tests its predictive validity

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