THE ROLE OF THE SPINAL CORD IN BOWEL DYSFUNCTION SECONDARY TO MULTIPLE SCLEROSIS: A COMPARISON WITH SUPRA-CONAL SPINAL CORD INJURY

doi:10.1136/gut.2011.239301.55

G Preziosi,* A Roy, P Boulos, A Emmanuel
GI Physiology Unit, University College London Hospital, London, UK

Introduction Bowel dysfunction in multiple sclerosis (MS) and spinal cord injury (SCI) is common, affecting up to 2/3 of patients, with constipation and incontinence often co-existing. In MS we have shown that spinal cord involvement by the disease predicts bowel dysfunction. Spinal disease burden is easily measured clinically by EDSS (expanded disability status scale, 0–4.5 = mild disability, 5–10 = high disability). In supraconal-SCI the autonomic dysfunction underlying bowel symptoms causes increased rectal compliance (RC). We hypothesised that spinal cord involvement by MS is responsible for the autonomic dysfunction affecting the rectum, hence compared RC between MS, supraconal-SCI patients and normal controls.

Methods Forty-five MS patients with bowel symptoms were divided in two groups according to EDSS: MS-A (EDSS < 5, n = 25) and MS-B (EDSS > 5, n = 20). Rectal compliance and Wexner constipation and incontinence scores were compared with 19 Supraconal-SCI patients and 25 normal controls. Age, gender and parity were well-matched between groups.

Results Rectal compliance (ml/mmHg) post-hoc analysis in table 1.

<table>
<thead>
<tr>
<th>Group</th>
<th>Rectal Compliance (ml/mmHg)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS-A (EDSS &lt; 5, 10.5 ± 4.3) vs Normal (11 ± 3)</td>
<td>0.981</td>
<td></td>
</tr>
<tr>
<td>MS-A (EDSS &lt; 5, 10.5 ± 4.3) vs MS-B (EDSS &gt; 5, 15.4 ± 5.6)</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>MS-A (EDSS &lt;5, 10.5 ± 4.3) vs Spinal (18 ± 5.8)</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>MS-B (EDSS &gt; 5, 15.4 ± 5.6) vs Normal (11 ± 3)</td>
<td>0.016</td>
<td></td>
</tr>
<tr>
<td>MS-B (EDSS &gt; 5, 15.4 ± 5.6) vs Spinal (18 ± 5.8)</td>
<td>0.303</td>
<td></td>
</tr>
<tr>
<td>Spinal (18 ± 5.8) vs Normal (11 ± 3)</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
</tbody>
</table>
Wexner-Incontinence:
MS-A (6.12 ± 4.72) vs MS-B (9.8 ± 6.4) p = 0.96
MS-A (6.12 ± 4.72) vs Spinal (10.8 ± 5.3) p = 0.033
MS-B (9.8 ± 6.4) vs Spinal (10.8 ± 5.3) p = 0.883.

Wexner-Constipation:
MS-A (10.8 ± 5.3) vs MS-B (11.3 ± 4.3) p = 0.951
MS-A (10.8 ± 5.3) vs Spinal (15.4 ± 5.8) p = 0.025
MS-B (11.3 ± 4.3) vs Spinal (15.4 ± 5.8) p = 0.065.

In the MS group there was a strong relationship between EDSS and RC (r = 0.438, p = 0.003; β = 0.487, p = 0.001).

Conclusion
Rectal compliance is increased similarly in both MS patients with high disability and supraconal-SCI patients, suggesting that similar autonomic dysfunction underlies bowel symptoms in both groups. Bowel dysfunction in MS is multifactorial, but spinal cord involvement by MS seems critical to development of both constipation and incontinence.

Competing interests None.

Keywords motility, multiple sclerosis, Neurological bowel dysfunction, rectal compliance, spinal cord injury.
The role of the spinal cord in bowel dysfunction secondary to multiple sclerosis: a comparison with supra-conal spinal cord injury

G Preziosi, *, A Roy, P Boulos and A Emmanuel

Gut 2011 60: A27-A28
doi: 10.1136/gut.2011.239301.55

Updated information and services can be found at:
http://gut.bmj.com/content/60/Suppl_1/A27.2

These include:

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections
Constipation (198)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/