Bowel Dysfunction in Multiple Sclerosis

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Bowel symptoms are seen in two thirds of multiple sclerosis (MS) patients, constipation and fecal incontinence, frequently coexisting, being the major symptoms. Since bowel symptoms are common in community, the need for precise definitions of pathology are stressed. Pathophysiological studies of bowel function are reviewed and the following hypothesis is suggested: Constipation is caused by a delay in colonic transit time, by a delay in the defecation reflex and by early external sphincter exitation. Fecal urgency/incontinence may be explained by impaired rectal sensation, not warning the patient to seek the toilet in time. Decrease in rectal compliance and in some patients abnormal rectal contractions may facilitate fecal expulsion and weak external sphincters allow leakage. Treatment options are commented and the need for treatment studies stressed.

KEY WORDS: autonomic dysfunction; multiple sclerosis; bowel symptoms; anorectal manometry; bowel; pathophysiology.

INTRODUCTION

Recent studies have disclosed that bowel problems are more frequent and troublesome in multiple sclerosis (MS) patients than previously thought. In 1965 Miller et al. estimated the frequency of constipation to 37% and that of fecal urgency to 10% in a group of unselected MS patients. They found it very difficult to determine the size of the problem, since “there was so much constipation in community” (1). It was recognized that constipation was common in advanced disease but fecal incontinence was regarded as uncommon (2). Hinds et al in 1990 reported that 51% of 280 unselected MS patients had experienced fecal incontinence in the preceding 3 months and that 25% suffered...
from fecal incontinence at least once a week (3). Forty-three % suffered from constipation. In a recent study by Chia et al., 68% of 77 MS patients with bladder symptoms were described as having abnormal bowel function. Fecal incontinence within the past 3 months was experienced by 20% and had previously been experienced by another 50%. No correlation with age, sex, duration of MS and disability score was demonstrated (4). In a group of 30 MS patients consecutively selected by the present author from an outpatient clinic and a rehabilitation center, bowel symptoms were present in 93%, fecal incontinence had been experienced by 53% and constipation was a symptom in 73% (5).

As stated by Miller et al., bowel symptoms are common in the community: Drossman et al. in a population survey of 789 young Americans not seeking health care, reported that 25% had alternating bowel function (loose or frequent stools changing with hard or infrequent stools) at least 25% of the time. Subjective awareness of constipation, based on straining at least 25% of the time, was reported by 17,5% (6). If however constipation was defined as a stool frequency of 2 per week or less, only 5.8% fell into that category. The authors defined bowel dysfunction as a combination of alternating bowel function and irritable bowel symptoms such as pain, diarrhoea and constipation. With this narrower definition a prevalence of bowel dysfunction of 17.1% was calculated. It was interesting that none reported fecal incontinence. This study emphasizes the importance of a precise terminology, especially for research purposes. The prevalence studies are summarized in Table 1.

**SYMPTOMS**

The MS patients complain of infrequent passage of stool, straining at passing stool, which not necessarily need to be hard, inability to suppress the urge to defecate which may lead to involuntary passing of stool, i.e. fecal incontinence, or in severe cases automatic, involuntary bowel emptying. Incontinence of flatulence is also frequently reported. Special manoeuvres such as rectal manipulation, use of suppositories and enemas may be used. The following definitions are suggested

**Constipation:**
- \( \leq 2 \) bowel movements per week, and/or
- special manoeuvres or use of laxatives, suppositories etc. necessary > 25% of the time

**Incontinence of flatulence:**
- involuntary passage of air

**Fecal incontinence**
- the involuntary passing of stool