24-28 Ottobre 2025
Padova Congress

55° CONGRESSO SOCIETÀ ITALIANA DI NEUROLOGIA

Patterns and Clinical Implications of Neurogenic Bowel Dysfunction in Multiple Sclerosis

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OBJECTIVES

Neurogenic bowel dysfunction (NBD) is a common often underestimated complication of multiple sclerosis (MS), significantly contributing to patient disability. Most patients with MS experience bowel dysfunction, including constipation, fecal incontinence (FI), or both, which impact their quality of life (QOL). Bowel problems are ranked as the third most bothersome symptom, following fatigue and mobility issues[1]. This study aims to explore bowel and pelvic floor dysfunction in a real-world MS cohort and examine associations with clinical variables.

MATERIALS

We retrospectively reviewed clinical and functional data from MS patients followed at the Multiple Sclerosis Center and the Rehabilitation Medicine Unit of the University Hospital Policlinico of Bari. Data were gathered from medical histories, pelvic examinations and NBD score assessments.

METHODS

Data from 79 MS patients were analyzed. Demographics, MS subtype, disease duration, disability level (EDSS), and pelvic floor classification were collected. Bowel dysfunction was assessed using the NBD score, and patients were grouped by severity. Comparisons were made using Student's T test or the chi-square test.

RESULTS

Among the 79 patients, 58 (73.4%) were female; 55 had relapsing-remitting MS (RRMS), 8 had primary progressive MS (PPMS), and 16 had secondary progressive MS (SPMS). Median age at onset was 27.7 years (IQR 22.2–37.9), with a mean follow-up of 15 years. Pelvic floor dysfunction was underactive in 64.6% and hyperactive in 29.1% of cases. Moderate-to-severe bowel dysfunction (NBD ≥10) was present in 52.1% of patients and was associated with progressive disease (35.7% vs. 24.3%), irreversible disability (EDSS ≥4 in 64.3% vs. 36.5%), and longer disease duration (19 vs. 15.5 years). Most patients (88.6%) had both brain and spinal cord lesions. Symptoms included obstructed defecation (41.8%), constipation with fecal urgency (41.8%), abdominal bloating and fecal incontinence with constipation (11.4%), and isolated fecal incontinence (5.1%). Fecal calprotectin was positive in 2.4%, and lactose intolerance in 34.2%.

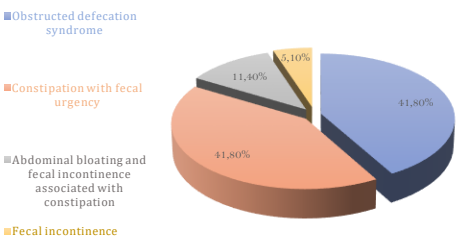

Figure 1. Distribution of bowel dysfunction symptoms in the study population. Constipation with fecal urgency and obstructed defecation syndrome were the most frequent disturbances, while isolated fecal incontinence was less common.

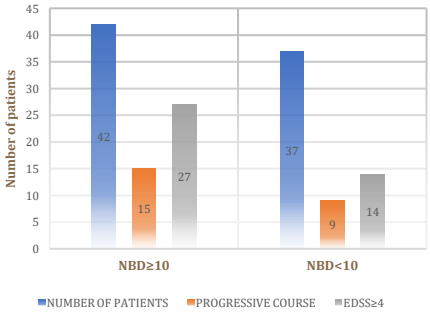

Figure 2. Comparison between patients with NBD≥10 (42 patients) and patients with NBD<10 (37 patients). Patients with NBD≥10 had a higher prevalence of patients with a progressive course (35.7% vs 24.3% in patients with lower scores), an irreversible EDSS ≥4 (64.3% vs 36.5%) and a longer mean disease duration (19 years vs 15.47 years).

DISCUSSION

Our findings highlight the high prevalence and variability of NBD in MS. Severe bowel symptoms are associated with progressive disease, greater disability, and longer disease duration. Differentiating MS-related symptoms from gastrointestinal conditions is crucial, particularly when symptoms mimic inflammatory bowel diseases.

CONCLUSIONS

NBD is a multifaceted complication in MS that worsens with disease progression and correlates with greater disability. Recognizing and addressing MS-related bowel symptoms is essential for improving patient care.

REFERENCES: 1-Gulick EE. Neurogenic Bowel Dysfunction Over the Course of Multiple Sclerosis: A Review. *Int J MS Care.* 2022;24(5):209–217.