Occupational Therapy's Role in Bowel and Bladder Symptom Management in Multiple Sclerosis

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Purpose

Describe occupational therapy (OT) intervention strategies for management of bowel and bladder dysfunction in patients with Multiple Sclerosis (MS), and provide descriptive case studies with clinical outcomes to demonstrate how some of these strategies can be applied clinically.

Background

Bladder symptoms are reported by 80% of individuals living with MS, and approximately 50% of the MS population report bowel symptoms.[3,6] Evidence demonstrates a significant correlation between urinary symptoms and longer disease duration, increased physical disability, and reduced quality of life. Bowel dysfunction can lead to decreased quality of life and social isolation. Evidence has shown that early recognition and treatment of bowel and bladder dysfunction may reduce the severity of symptom progression and improve health-related quality of life.[2,3,6,8]

Occupational therapists (OTs) address toileting and toileting hygiene in clinical treatment as a component of a person's Activities of Daily Living (ADLs). This includes positioning, care for continence needs, completion of intentional control of urination and bowel movements, and use of equipment/agents for bladder control.[1] OT interventions that can be utilized to address this ADL include adaptive equipment training, pelvic floor training, relaxation techniques, bladder retraining, habit and routine management, and positioning.

Methods

Outcome measures were collected at time of evaluation and at the last follow-up visit. Clinical measures used were:

- Multiple Sclerosis Quality of Life Inventory (MSQLI): battery of ten scales such as the Modified Fatigue Impact Scale (MFIS), Bladder Control Scale (BLCS), Bowel Control Scale (BWCS), Sexual Satisfaction Scale (SSS), and more.[7]
- RAND Short Form-36 Health Survey (SF-36): quality of life inventory with nine subscales measuring physical, emotional, and social health.[4]
- Canadian Occupational Performance Measure (COPM): valid and reliable; patients identify areas of functional difficulties and self-rate their performance and satisfaction with those activities.[5]

Patient (Pt) one was seen for evaluation and 17 treatment visits over a period of 36 weeks. Pt two was seen for evaluation and nine treatment visits over a period of 16 weeks.

Bladder and bowel symptom management was addressed within the course of a typical OT plan of care, in which multiple other basic ADLs and Instrumental Activities of Daily Living (IADLs) were addressed.

Case Studies

Case Study One	Case Study Two
BACKGROUND: • Pt is a 71 y/o female w/MS, spinal stenosis and depression • Pt complains of urinary urgency, frequency, and incontinence, and constipation • Decreased community participation and social isolation, increased falls risk, and decreased sleep quality	BACKGROUND: • Pt is a 65 y/o female w/MS and osteoarthritis • Pt complains of urinary incontinence, urgency, frequency, and hesitation, and fecal incontinence • Disruption of work and related task completion, decreased physical activity engagement, and reduced sleep quality
INTERVENTIONS: • Adaptive equipment to manage incontinence • Eating and hydration routine modifications to reduce intake of irritants and diuretics • Relaxation techniques to reduce sympathetic activation and risk of incontinence • Fluid titration to reduce impact on community participation and sleep quality • Bladder retraining including timed voiding and bladder diary analysis • Positioning during toileting ADL routines	INTERVENTIONS: • Fluid titration to reduce impact on work routines and task completion • Bladder retraining including timed voiding and bladder diary analysis • Pelvic floor training – contraction and relaxation • Relaxation techniques to reduce sympathetic activation and risk of incontinence • Eating and hydration routine modifications to reduce intake of irritants and diuretics, and increase fiber intake
POST-INTERVENTION OUTCOMES: • Increased self-efficacy with symptom management • Increased community integration and social participation • Improved quality of life and emotional well-being	POST-INTERVENTION OUTCOMES: • Improved symptom management • Decreased frequency of work disruption and improved work output • Improved participation in physical activity • Improved emotional well-being

Results

COPM scores range from 1-10, with higher scores indicating better perceived performance or satisfaction. A 2-point change is considered clinically significant.[5] Higher scores in the MSQLI subscales indicate more impact or impairment in daily life.[7] RAND SF-36 subscales range 0-100, with higher scores indicating better quality of life in that area.[4]

	Case Study One		Case Study Two	
	Pre	Post	Pre	Post
COPM	Overall performance 5.4 Overall satisfaction 4.4 Bladder mgmt 6.0	Overall performance 7.4 Overall satisfaction 7.0 Bladder mgmt 8.0	Overall performance 6.8 Overall satisfaction 3.2 Bowel/bladder mgmt 9.0	Overall performance 7.0 Overall satisfaction 6.4 Bowel/bladder mgmt 3.0
MSQLI	BLCS 19 BWCS 7 MFIS 15 SSS 5	BLCS 14 BWCS 5 MFIS 11 SSS 5	BLCS 20 BWCS 10 MFIS 11 SSS 5	BLCS 8 BWCS 4 MFIS 6 SSS 7
RAND SF-36	General health 40 Physical function 15 Emotional well being 64 Social function 25 Energy/fatigue 0	General health 50 Physical function 10 Emotional well-being 84 Social function 75 Energy/fatigue 35	General health 20 Physical function 35 Emotional well-being 48 Social function 50 Energy/fatigue 20	General health 40 Physical function 50 Emotional well-being 72 Social function 75 Energy/fatigue 60

Discussion

This case study highlights the methodology and strategies OTs can utilize to address toileting ADL function with individuals living with MS who experience bowel or bladder symptoms, and demonstrates the benefits of OT interventions in managing neurogenic pelvic floor dysfunction, as well as emotional and cognitive aspects of bowel and bladder management.

The case study outcomes demonstrate improvements in bladder control (BLCS) and bowel control (BWCS). In addition, other quality of life and functional areas that may impact bowel and bladder management showed improvements, including fatigue (MFIS), emotional well-being, social function, and overall performance and satisfaction in COPM scores.

The patient in Case Study 2 shows a decrease in bowel/bladder management self-ratings before and after intervention. However, the patient reported upon discharge that her lack of awareness of all possible techniques and strategies for managing her bowel and bladder symptoms was why she rated herself so highly pre-treatment, and her continued efforts to implement these strategies were the cause for her significantly lower self-scoring post-intervention.

These case studies add to a growing body of evidence that suggests OT interventions can make a significant difference in function and quality of life for people living with MS, including those who present with bowel and bladder symptoms.

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