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A rare condition of anorectal dysfunction in a patient with multiple sclerosis: Coexistence of faecal incontinence and mechanical constipation: Report of case



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ABSTRACT

INTRODUCTION: Multiple sclerosis is a chronic demyelinating neurological disease and causing a variety of neurological symptoms, including discomfort of anorectal function. Constipation and faecal incontinence present as anorectal dysfunction in MS and anal manometry, colonic transit time, electromyography, and defecography can be used for assessment.

PRESENTATION OF CASE: We presented a thirty-three years old woman with rare condition of anorectal dysfunction in multiple sclerosis. Anal manometry, defecography were done, and synchronously anal incontinence and mechanical constipation due to rectocele and anismus were detected in this patient.

DISCUSSION: Although anal incontinence and constipation are seen often in patients with multiple sclerosis, in the literature, coexistence of anismus, rectocele and anal incontinence are quite rare.

CONCLUSION: Defecography and anal manometry are useful diagnostic methods for demonstration of anorectal dysfunctions in patients with MS.

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1. Introduction

Multiple sclerosis (MS) is a chronic neurological disease and characterised by multiple demyelinating lesions within the central nervous system causing a variety of neurological symptoms, including discomfort of the urinary bladder and anorectal function.^{1,2} Anorectal dysfunction (ARD) presents 48.2% of patients with MS including constipation 18–43% and anal incontinence 1–69%.^{3,4} Anal manometry, colonic transit time, electromyography, and defecography can be used for assessment of ARD in MS.⁵ Management of ARD is empiric including high fibre diet, adequate fluid intake, physical exercise, regular bowel routine, manual evacuation of faeces, and use of enemas or laxatives.⁶ We presented a rare condition of anorectal dysfunction in a patient with multiple sclerosis. Synchronously anal incontinence and mechanical

constipation due to rectocele and anismus were detected by the help of anal manometry and defecography in this patient.

2. Patient information

Thirty-three years old woman with history of 10 years multiple sclerosis was applied to general surgery with constipation, lower abdominal pain, and gas incontinence complains.

3. Clinical findings

There was no pathology at abdominal examination, laboratory tests, direct X-ray graphy. External impression was found at rectal examination.

4. Timeline

She has a ten-year history of multiple sclerosis and her complains started at three years ago.

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Table 1
Anal manometry results of the patient.

	Function	Result	Reference	Comment
1. Basic pressure measurement				
Resting anal pressure	IAS	43	40–70 mmHg	Normal
Maximal squeeze pressure	EAS	53	100–180 mmHg	Compatible with weak external anal sphincter (myogenic or neurogenic)
Endurance squeezing duration	EAS	30	>45 sn	
Sphincter length		2.5	2.5–4 cm	Normal
2. Sensory and reflex measurements				
Minimum sensory volume	In the evaluation of	30	<60 ml	Normal
First defecation sensation	rectal sensitivity and	60	60–100 ml	Normal
Maximum tolerable volume	compliance	140	140–320 ml	Normal
Cough reflex	Sacral reflex arc	54	Close to maximal squeezing pressure	Normal
Rectoanal inhibitory reflex (RAIR)		Not seen at 90 ml	More than 25% decrease in resting pressure	Noropathy

5. Diagnostic assessment

Insufficient colonoscopy was done because of patient’s inability of gas continence. Wexner anal incontinence score of the patient was 8. The patient underwent anal manometry. Resting pressure was normal but maximal squeeze pressure and endurance squeezing duration were significantly low that compatible with

weak external anal sphincter muscle (myogenic or neurogenic origin). Also resting anal inhibitory reflex (RAIR) was not seen at 90 ml. (Table 1). Defecography was done after necessary preparations. Additional to rectocele, there was no movement in puborectalis muscle (PRM) at the beginning, middle and end of straining (puborectalis syndrome or anismus) at defecography (Fig. 1).

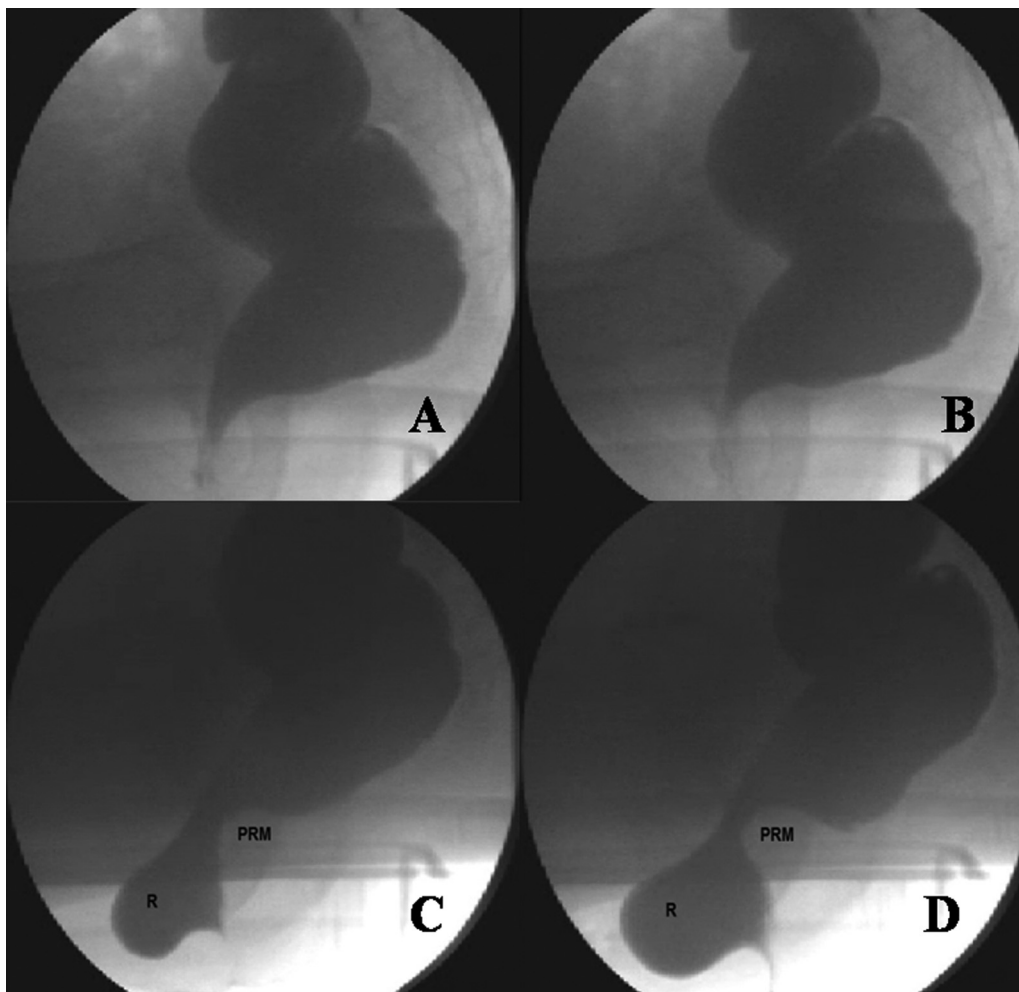


Fig. 1. Defecographic images of the patient with multiple sclerosis. (A) View of rectum at filled with barium paste during rest. (B) View of rectum during squeezing showing pelvic floor elevation and impression of puborectalis muscle which is normal. (C) Rectocele and lack of puborectalis muscle relaxation during straining. (D) Increased size of rectocele and continued lack of puborectalis muscle relaxation during defecation.

6. Therapeutic intervention

Initially biofeedback with medications for pain and constipation was recommended to patient.

7. Follow-up and outcomes

No benefit was seen from these actions two months after the first application in follow up. An advanced centre was recommended to the patient where a consensus can be reached among patient, neurologist and a gastrointestinal surgeon for treatment of this complicated disease.

8. Discussion

Anorectal dysfunction is very common in patients with MS and impact the quality of life. The mechanism of ARD can be referred as normal or slightly decreased resting and a significantly decreased squeeze pressure in patients with constipation, and similar findings in faecal incontinence with an even higher incidence of impaired function of the external anal sphincter.⁵ ARD in MS is associated with elder age, greater disability, longer duration of disease and urinary dysfunctions. Female sex, expanded disability status scale and urinary dysfunctions are independent predictors for ARD in MS.³

Waldron et al. investigated six females suffering from multiple sclerosis (MS) with symptoms of constipation and faecal incontinence in their study. Their physiological studies demonstrate that in patients with MS who had anorectal dysfunction, there is a marked impairment of external anal sphincter function with moderate changes in pelvic floor musculature. The only anatomical defect was the presence of a rectocele in two patients.⁵

Munteis et al. reported that the most frequent anal manometric abnormalities in MS patients with ARD were alterations of maximal pressures, anal inhibitory reflex and paradoxical contraction.⁷

In Gill et al.'s study defecography readily demonstrated rectal outlet obstruction and the failure of the puborectalis and anal sphincter muscles to relax in patients with MS who had intractable constipation.⁸

Anorectal dysfunction is an important discomfort to patients with multiple sclerosis. Although anal incontinence and

constipation are seen often in patients with multiple sclerosis, when we look at the literature, coexistence of animus, rectocele and anal incontinence are quite rare. Additionally defecography and anal manometry are useful diagnostic methods for demonstration of anorectal dysfunctions in patients with MS.

9. Patient perspective

The patient had anorectal complains accompanied by severe pain for a long time. Thus, she was very enthusiastic about the determination of diagnosis and treatment.

10. Informed consent

Informed consent for obtained from the patient.

Conflict of interest

The authors declare that they have no conflict of interest. All authors contributed equally to this study.

Funding

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Ethical approval

We state our study does not violate the policies and procedures established by journal such as those described in 'Specific Inappropriate Acts in Publication Process'.

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

Author contributions

Research concept and design: Özgür Dandin, Yaşam Kemal Akpak; Collection and/or assembly of data: Özgür Dandin, Yaşam Kemal Akpak, Dursun Özgür Karakaş, Tuncer Ergin; Data analysis and interpretation: Batuhan Hazer, Tuncer Ergin; Writing the article: Özgür Dandin, Yaşam Kemal Akpak, Dursun Özgür Karakaş; Critical revision of the article: Taner Dandinoğlu, Uygur Teomete, Batuhan Hazer; Final approval of article: Özgür Dandin.

Key learning Points

- Anorectal dysfunction is very common in patients with MS and impact the quality of life.
- Although anal incontinence and constipation are seen often in patients with multiple sclerosis, coexistence of animus, rectocele and anal incontinence are quite rare.
- Defecography and anal manometry are useful diagnostic methods for demonstration of anorectal dysfunctions in patients with MS.

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