Anorectal sensory dysfunction in dyssynergic defecation:

A manometric perspective

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Background

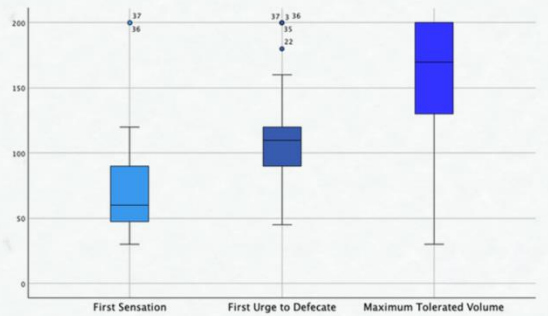
High-resolution anorectal manometry (HR-ARM) confirm the diagnosis of defecatory disorders by identifying dyssynergic patterns and abnormal sensory thresholds.

Table 1. Distribution of dyssynergia types according to anorectal sensitivity

Type of Dyssynergia	Total n (%)	Hyposensitivity (%)	p
1	14 (35)	4 (10)	**0.047**
2	13 (32.5)	10 (25)	**0.018**
3	6 (15)	2 (5)	0.376
4	7 (17.5)	4 (10)	0.677
Total	40	20 (50)	

Note: Comparison of anorectal sensory alterations (hyposensitivity).

Figure 1. Distribution of rectal sensory thresholds among patients with dyssynergic defecation



Note: There is notable variability in rectal sensitivity across participants, particularly in the maximum tolerated volume. Outliers are marked individually. These results complement the findings presented in Table 2.

Methods

Retrospective
Observational
Analytical study
All were older than 20 years.
A statistical analysis of the sensitivity test values was performed associating them with the type of defecatory dyssynergia (DD)
IBM SPSS Statistics version 30.0

Results

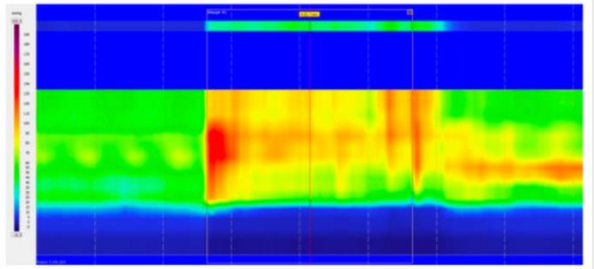
- 40 patients. The age was 20-84 ± 14.86. An association was made between each type of dyssynergia and the presence or absence of alterations in sensitivity (Table 1).
- Most frequent type of DD: Type 1 (35% of the cases).
- Type 1 and Type 2 of DD showed association with hyposensitivity (p= 0.047 and 0.018).
- Type 2 DD presents a higher average and standard deviation in the first sensation and first urge to defecation: 91.15 ± 40.008 and 128.46 ± 40.176.
- Type 4 DD showed a higher maximum tolerated volume: 176.43 ± 34.966.

Table 2. Rectal sensory thresholds according to type of dyssynergia

Type of Dyssynergia	First Sensation (mean ± SD)	p	First Urge to Defecate (mean ± SD)	p	Maximum Tolerated Volume (mean ± SD)	p
1	60 ± 41.695	0.254	104 ± 34.633	0.440	153 ± 41.887	0.626
2	91.15 ± 40.008	0.011	128.46 ± 40.176	0.059	168.46 ± 48.450	0.356
3	45 ± 14.832	0.089	78.33 ± 26.957	0.015	126.67 ± 35.590	0.052
4	69.29 ± 23.171	0.987	120.71 ± 47.822	0.498	176.43 ± 34.966	0.237
Total	69.50 ± 38.260		111.12 ± 40.501		158.50 ± 43.724	

Note: Rectal sensory thresholds: first sensation, first urge to defecate, and maximum tolerated volume.

Figure 2. High-resolution anorectal manometry (HR-ARM) of a patient with Type I dyssynergic defecation.



Note: The image demonstrates a simulated defecation maneuver showing paradoxical contraction with sufficient intra-rectal pressure.

Conclusions

Patients with DD exhibit a reduced threshold for urgency to defecate, indicating altered anorectal sensory function. The volumes required to elicit defecatory urgency have potential implications for optimizing therapeutic strategies, particularly in tailoring biofeedback and behavioral interventions.