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**Prevalence of dyssynergic defecation in children with constipation evaluated by high-resolution anorectal manometry**

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*Dear Editor,*

Dyssynergic defecation, defined as the incoordination of rectoanal and abdominal muscles and the pelvic floor, which are necessary for the appropriate relaxation, is characterized by paradoxical anal contraction, inadequate anal relaxation, or abnormal rectal propulsion, and is considered as a cause of refractory primary constipation (1). The prevalence of dyssynergic defecation in the pediatric age is still not well known. The studies that have evaluated the defecation dynamics through anorectal manometry suggest that 36.8% to 80.9% of children with functional constipation (FC) (2,3) present dyssynergic defecation. High-resolution anorectal manometry (HRAM) is a tool for the evaluation of the sensitivity and defecation dynamics (4,5), and allows to establish the diagnosis of dyssynergia and its classification.

The objective of this study was to determine the prevalence of dyssynergic defecation in children with FC and to characterize the most common type of dyssynergia evaluated through a HRAM. In

this study, 63 files of pediatric patients with FC diagnoses were included. Of these, 41.3 % (n = 26) were female and 58.7 % (n = 37) were male. The median age in the group of dyssynergia was eight years, while for the FC group it was nine years; the distribution by sex was similar. Of the included patients, 41.3 % (n = 26) showed dyssynergic defecation, and 58.7 % (n = 37) showed normal anorectal manometry. Regarding the type, 84.6 % (n = 22) were type I, and 7.7 % (n = 2) were types III and IV; no patients were reported with type II.

When comparing the parameters of the HRAM, there was a higher pressure at rest of the internal anal sphincter in children with dyssynergic defecation:  $47 \pm 14$  mmHg vs  $37 \pm 15$  mmHg ( $p = 0.013$ ) in children with functional constipation without dyssynergia. The rest of the parameters did not show significant differences (Table 1). History of retentive fecal incontinence was observed in 40 % of the children with functional constipation and 34 % in those with dyssynergic defecation, which was not statistically significant ( $p = 0.401$ ).

In conclusion, around half of the children with FC present a diagnosis of dyssynergic defecation, and type I was the most frequent. Children with dyssynergic defecation presented a higher internal anal pressure at rest than children with functional constipation without dyssynergic defecation. There were no differences in the percentage of patients with fecal incontinence among the patients with and without dyssynergia. Children that do not respond to the conventional treatment must be referred to centers specialized in gastrointestinal motility since, as they present dyssynergic defecation, strategies like psychotherapy, biofeedback therapy, or electrostimulation for abdominal, rectoanal and pelvic floor coordination training must be considered.

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**Table 1. Comparison between anorectal manometry parameters in children with defecatory dyssynergia and with functional constipation without defecatory dyssynergia**

<i>Anorectal manometry parameters</i>	<i>Functional constipation (n = 37)</i>	<i>Defecatory dyssynergia (n = 26)</i>	<i>p</i>
Resting pressure (mmHg)	37 (± 15)	47 (± 14)	0.013
Maximum pressure (mmHg)	104 (± 46)	122 (± 82)	0.325
First sensation (ml)	77 (± 50)	99 (± 64)	0.141
Urgency (ml)	117 (± 64)	146 (± 61)	0.083
Maximum tolerability (ml)	148 (± 65)	178 (± 57)	0.630