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Dyssynergic Defecation is a Common Finding in Men with Chronic Constipation

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Background

- Dyssynergic defecation (DD) is a recognized cause of chronic constipation
- DD is characterized by the inability to coordinated a series of events necessary to achieve evacuation of stool from the rectum
- DD can be identified on Anorectal Manometry (ARM) & Balloon Expulsion Testing (BET) by:
 - Paradoxical contraction of the anal sphincter during simulated evacuation (response to simulated defecation)
 - Inability to pass a water filled balloon through the anal canal within a prescribed period of time

Aim

To assess the impact of age on gender on the diagnosis of dyssynergic defecation as defined by ARM & BET on adults with chronic constipation

Methods

Study Design

- Retrospective cohort study of all ARM+BET studies performed at the University of Michigan GI on adults with chronic constipation
- All studies performed in the Physiology Laboratory between 2002-2007
- 411 ARM studies and 370 BET studies reviewed
 - 99% of studies performed by the same technician (JB)
 - 97% of studies interrupted by the same physician (WDC)

Data Collection

- Age
- Gender
- Response to simulated defecation on ARM (recorded as normal or abnormal)
- Balloon expulsion test result (recorded as normal or abnormal)

Anorectal Manometry (ARM)

Software: Sandhill Scientific
InsightEquipment: Mk II Manometric Perfusion Pump (Dentsleeve Proprietary Ltd.)
Probe: Four-channel water- perfused catheter (Mui Scientific)

Balloon Expulsion Test (BET)

Universal balloon attached to the end of 14Fr catheter
After insertion into the rectum, balloon filled with 50cc of sterile saline
Normal = ability to pass the balloon seated on a commode in less than 1 minute

Statistics

- Chi-square testing performed on dichotomous variables

Results

ARM & BET findings by Gender

	Overall			Age < 65			Age ≥ 65		
	Women n = 351	Men n = 60	P value	Women n = 299	Men n = 38	P value	Women n = 52	Men n = 22	P value
Abnormal ARM	49%	88%	<0.0001	48%	89%	<0.0001	52%	86%	0.0052
Abnormal BET	43%	57%	0.056	43%	43%	0.96	46%	81%	0.0068
Both ARM & BET abnormal	23%	54%	<0.0001	21%	44%	0.0037	34%	71%	0.0076

ARM & BET findings by Age

	Overall			Women			Men		
	Age < 65 n = 337	Age ≥ 65 n = 84	P value	Age < 65 n = 299	Age ≥ 65 n = 52	P value	Age < 65 n = 38	Age ≥ 65 n = 22	P value
Abnormal ARM	53%	62%	0.14	48%	52%	0.62	89%	86%	0.70
Abnormal BET	43%	39%	0.04	43%	46%	0.70	43%	81%	0.006
Both ARM & BET abnormal	24%	46%	0.0001	21%	34%	0.06	44%	71%	0.01

Summary

- Constipated men were twice as likely as constipated women to demonstrate dyssynergic defecation rigorously defined as abnormal ARM **AND** BET
- Constipated elderly adults (aged 65 & older) were more likely than constipated younger adults to demonstrate dyssynergic defecation
- Elderly men with constipation (aged 65 & older) had the highest prevalence of dyssynergic defecation
 - Prevalence was greater than that of young men (p = 0.01), elderly woman (p < 0.01) and young woman (p < 0.01)

Conclusions

- Dyssynergic defecation is a common finding in men with refractory chronic constipation
 - Contrary to conventional wisdom, dyssynergia may be more common in men than women
- The prevalence of dyssynergia was greatest in elderly men with refractory chronic constipation
- Clinicians should have a low threshold for ordering ARM + BET in men with chronic constipation failing empiric laxative therapy.