



University of Michigan Health System

Do Constipation Symptoms Predict Dyssynergic Defecation as Defined by Anorectal Manometry

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Background

- Dyssynergic defecation (DD) represents a common cause of chronic constipation (CC)
- Physiologic testing for DD is of limited availability and can be costly as well as embarrassing to the patient
- It has been suggested that commonly reported constipation symptoms may accurately predict the presence of DD

Aim

- Assess for an association between common constipation symptoms and presence of DD as defined by anorectal manometry (ARM) and balloon expulsion testing (BET)

Methods

- Adults with CC presenting to the GI physiology lab for ARM/BET testing at the University of Michigan from 9/09 to 11/11 were recruited
- 366 participants aged 17-90 were enrolled
 - Patient Assessment of Constipation Symptoms (PAC-SYM)
 - Additional constipation symptoms including Bristol Stool Scale
 - Symptoms reported as: none, mild, moderate, or severe
- DD defined by:
 - Abnormal BET (> 1 min to expel 50cc balloon)
 - And/or abnormal response of external anal sphincter to strain (lack of relaxation or paradoxical contraction)
- Statistical analysis
 - Chi square test to assess frequency of moderate to severe symptoms in normal ARM/BET vs. DD
 - T test to assess time in bathroom & stool consistency in normal ARM/BET vs. DD

Results

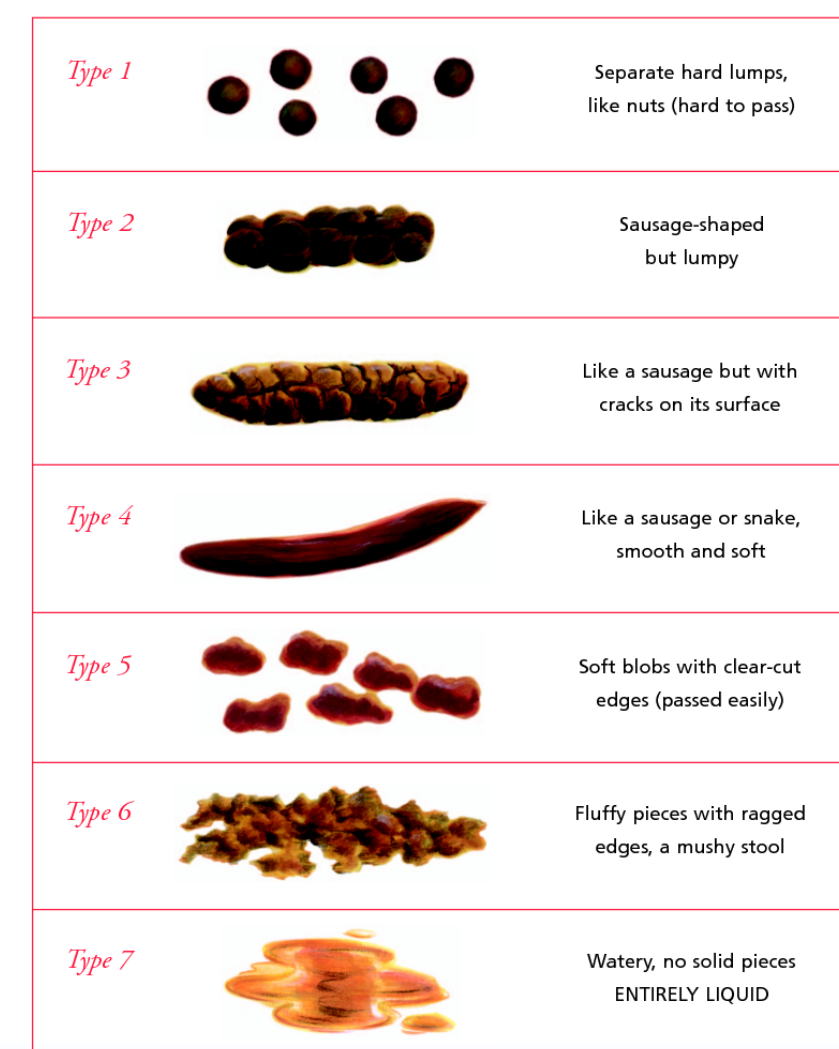
Subject Demographics

Mean age: 47.4 years
 Gender: 82.6%
 Race: 85% Caucasian

ARM/BET findings

Abnormal BET: 44% (90)
 Abnormal ARM: 32% (44)
 Abnormal ARM
 And BET : 24% (50)

THE BRISTOL STOOL FORM SCALE



Frequency of Moderate to Severe Constipation Symptoms

Symptom	N	Frequency of moderate to severe sx's		P value
		No DD	DD	
Abdominal discomfort	357	74.7%	77.4%	0.55
Abdominal pain	356	63.1%	64.8%	0.73
Abdominal bloating	359	80.8%	78.3%	0.57
Abdominal cramps	356	53.5%	59.9%	0.22
Painful bowel movements	358	47.8%	56.3%	0.11
Rectal burning	363	35.8%	34.2%	0.80
Rectal bleeding	360	24.5%	24.9%	0.94
Incomplete bowel movements	356	78.3%	86.4%	0.04
Hard bowel movements	358	54.1%	53.2%	0.86
Small bowel movements	355	73.0%	70.9%	0.67
Straining	360	81.1%	84.9%	0.39
Use of finger in rectum	361	38.4%	46.5%	0.12
User of finger in vagina	339	7.7%	10.3%	0.41
Use of finger in perineum	336	11.0%	13.7%	0.45
Difficulty passing soft stool	365	37.3%	39.7%	0.64
Unable to have bowel movement	362	60.4%	70.0%	0.06

Other Bowel Habits

	No DD	DD
Mean time spent in bathroom (minutes)	21	16*
Stool form (Bristol stool scale)	4.26	4.14*

*P = ns

Summary

- 56% had ARM/BET findings consistent with DD
- Out of 16 commonly reported constipation symptoms:
 - Sensation of an incomplete bowel movement was reported more frequently in DD
 - Inability to have a bowel movement was reported more frequently with DD
- Time spent in the bathroom tended to be longer with DD
- There was no difference in reported stool form between those with DD and those with normal ARM/BET

Conclusions

- In general, commonly reported constipation symptoms are not predictive of dyssynergic defecation as defined by ARM/BET
- The diagnosis of dyssynergic defecation requires objective testing and should not be based on the pattern of symptoms reported in chronic constipation