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# The number of retained rectosigmoid markers during colonic transit testing does not reliably predict the presence of Dyssynergic Defecation

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## BACKGROUND

- Patient subgroups of chronic constipation (CC) include slow colonic transit and/or dyssynergic defecation.
- Radiopaque marker (ROM) studies identify patients with slow transit CC while anorectal manometry (ARM) & the balloon expulsion test (BET) diagnose dyssynergic defecation (DD).
- The retention of markers in the rectosigmoid on ROM testing has been suggested to identify patients who are more likely to have DD.

## AIM

- We assessed whether the retention of markers in the rectosigmoid during ROM testing identifies patients more likely to have DD.

## METHODS

- Study Design: Retrospective cohort study of consecutive patients with persistent CC symptoms who were referred to a tertiary center and had undergone testing with ROM, ARM and BET.



- All studies were performed by 1 experienced technologist and interpreted by 1 expert GI specialist

- ROM testing was performed using the Metcalf method (24 ROM given on days 1,2,3 with AXRs obtained on days 4 & 7).

- DD was defined by an abnormal ARM (paradoxical anal sphincter contraction during simulated defecation) and/or BET (inability to pass a 50 cc water-filled rectal balloon within 60 seconds).

- The number of retained rectosigmoid (RS) markers on Day 4 (D4), Day 7 (D7), and combined (D4+D7) were tabulated.

- A logistic regression model was created to identify any relationship between the number of retained RS markers and the presence of DD.

- Statistical significance was defined as a P-value of <0.05 with an odds ratio (OR) > 1 and 95% CI which did not cross 1.

## RESULTS

- 127 CC pts (117F, mean age=43.9 (17-80) yrs) were included.
- 71/127 (56%) had an abnormal ARM and/or BET and were diagnosed with DD.
- No significant differences in the proportion of patients with slow transit by ROM testing was observed in those with and without DD (54% vs. 36%, p>0.05).

Day of ROM study	Diagnosis	#ROM in Rectosigmoid area			
		Range	Median	P-value	OR
D4	DD	0-51	5	0.62	0.99
	No DD	0-65	7		
D7	DD	0-46	1	0.38	1.02
	No DD	0-29	1		
D4+D7	DD	0-92	9	0.53	1.01
	No DD	0-56	10.5		

- Of patients with DD, 78% & 79% had fewer than 10 RS markers on D4 or D7, respectively.
- In a subgroup analysis using  $\chi^2$  statistics, patients with >25 retained RS markers on D4, D7, or combined were considered. There were no significant differences in number of subjects with and without DD.

## CONCLUSION

- Contrary to conventional wisdom, the number of retained rectosigmoid markers on ROM testing in CC patients did not predict the presence of dyssynergic defecation.
- ROM testing cannot be reliably used to identify patients in need of an evaluation for dyssynergic defecation.