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Refractory Constipation: Drugs, Stimulation or Surgery?

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Refractory Constipation: Drugs, Stimulation or Surgery?

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Case 1

A 38 year old woman is seen in consultation for chronic constipation of several years duration. Without laxatives, she has 1-2 stools/week which are passed with considerable straining; she averages 3-4 stools/week after using daily bisacodyl. Her physician is concerned about dependence on stimulant laxatives and or damage to the colon. Fiber supplements, PEG and lactulose make her bloated and uncomfortable.

She is otherwise well and takes no constipating medications. Physical examination is normal and stools are negative for occult blood.

AVAILABLE LAXATIVES

<p>BULK AGENTS</p> <ul style="list-style-type: none"> Psyllium Methylcellulose Calcium Polycarbophil Wheat dextrin 	<p>DIPHENYLMETHANES</p> <ul style="list-style-type: none"> Bisacodyl
<p>NONABSORBED SUBSTANCES</p> <ul style="list-style-type: none"> PEG Lactulose* Sorbitol Magnesium salts 	<p>ANTHRAQUINONES</p> <ul style="list-style-type: none"> Senna <p>SECRETORY DRUGS</p> <ul style="list-style-type: none"> Lubiprostone*

* Prescription only

STIMULANT LAXATIVES: Are they harmful to the colon?

- **No** reported cases of cathartic colon in persons who began to use laxatives after 1960. (Muller-Lissner, 1996)
- **No** evidence of enteric neuropathy with commercially available stimulant laxatives (animals or humans).
- **No** evidence of addiction or loss of efficacy with long term use association with increased risk of colon cancer

A Cost Comparison of Chronic Constipation Treatments

Treatment	Cost per month*
Psyllium 10 g 1-3 daily	\$ 3.30-9.90
Lactulose(20 g)	\$32.40
PEG 3350(17 g)	\$ 21.00**
Sorbitol (21 g)	\$ 23.30
Lubiprostone(24 mcg bid)	\$242.64
Senna (2 tab daily)	\$ 2.25
Bisacodyl (2 tab daily)	\$ 8.00
Magnesium hydroxide (2.4 g daily)	\$ 7.50

* 30-day month – costs. ** SuperTarget Madison, WI 6/09
 Costs may vary depending on insurance coverage. www. Drugstore.com Accessed 9/09

GUIDELINES FOR LAXATIVE USE

- Used appropriately, chronic use of laxatives is not harmful
- Use fiber and osmotic laxatives daily and titrate as necessary
- Use stimulant laxatives with goal of 2-4 stools weekly

Case 2

A 29 year old woman with chronic idiopathic constipation undergoes diagnostic studies after she fails to respond to fiber supplements, osmotic and stimulant laxatives and proprietary enemas.

Transit Study: Five days after swallowing 24 radioopaque markers, 20 remain scattered throughout a non-dilated colon.

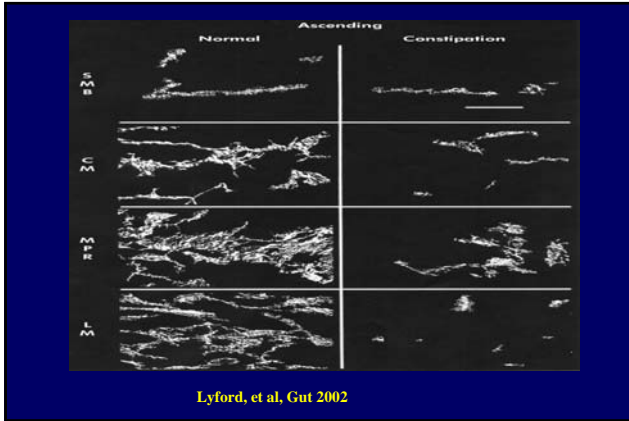
Defecation Studies: She is able to expel a 50 cc fluid filled balloon from the rectum within 2 minutes. Anorectal manometry is normal.

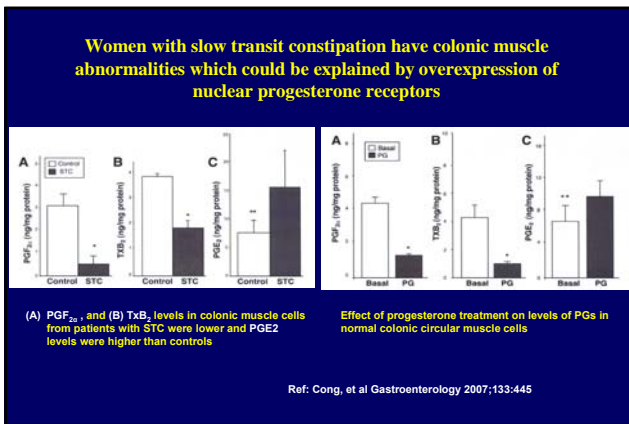
Diagnosis: Colonic inertia

COLONIC TRANSIT STUDIES

	Hinton (1969)	Metcalf (1987)
Day 1	24 Markers	24 Markers
Day 2		24 Markers
Day 3		24 Markers
Day 4		KUB
Day 5	KUB	
Day 6		
Day 7		KUB
Day 8		
Transit	---	$n_4 + n_7$
Normal	<5 markers on day 5	<70 Hr

KUB = Abdominal x-ray





PHARMACOLOGIC APPROACHES TO INTRACTABLE COLONIC INERTIA

Effective in Some
 Misoprostol & PEG

Generally Ineffective
 Metoclopramide
 Erythromycin
 Cholinergics
 Colchicine
 Lubiprostone

**SURGICAL APPROACHES TO
INTRACTABLE CONSTIPATION**

Subtotal Colectomy/Ileorectal Anastomosis

Sacral Nerve Stimulation?

Subtotal colectomy for colonic inertia

Intractable and disabling symptoms

Colonic inertia pattern

No evidence of intestinal pseudoobstruction

Normal anorectal function

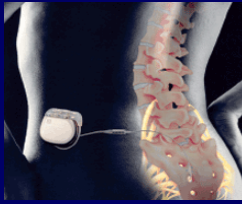
Abdominal pain is not prominent feature

**Long term morbidity following subtotal
colectomy for refractory constipation**

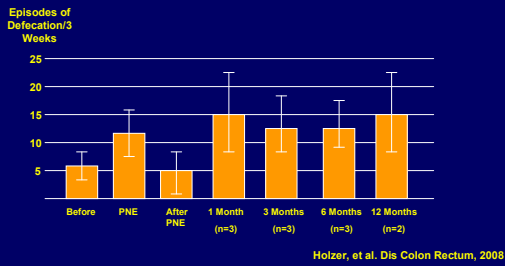
Ghosh, 1996 (N=20) Platell, 1996 (N=86)

Reoperation	40%	36%
Abdominal Pain	90%	54%
Bloating	80%	76%
Urge to Defecate	45%	--

SACRAL STIMULATION DEVICE



Effect of Sacral Nerve Stimulation on Slow Transit Constipation



Case 3

A 32 year old woman undergoes diagnostic studies after constipation fails to respond to fiber supplements, laxatives or lubiprostone. Her primary symptoms are straining at defecation, small stools and a sense of incomplete evacuation.

Colonic Transit: 5 days after swallowing 24 markers, 3 remain in the left colon and rectum (normal < 5).

Defecation Studies She is unable to expel a 50 cc fluid filled balloon from the rectum within 2 minutes. Anorectal manometry demonstrates abnormal expulsion effort.

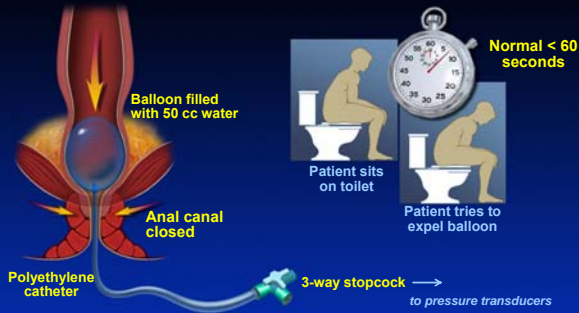
Diagnosis: Dyssynergic Defecation

FUNCTIONAL DISORDERS OF DEFECATION

Weak Propulsion	Megarectum Pain syndromes Neuromuscular diseases
Misdirection of Propulsion	Rectocele (uncommon)
Failure of IAS Relaxation	Hirschsprung disease
Poor Muscle Relaxation	Dyssynergia

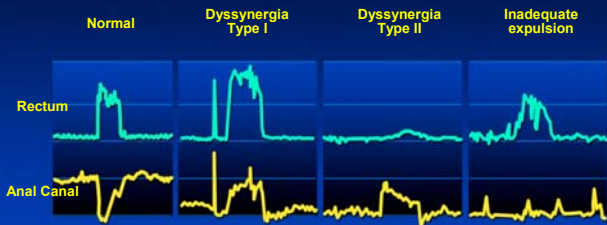
Diagnostic Tests

Balloon Expulsion Test

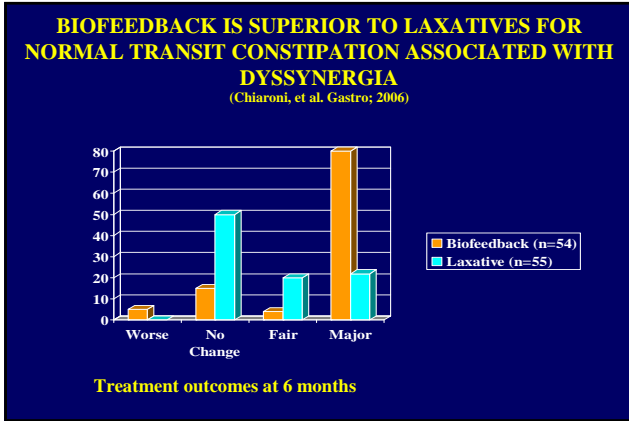


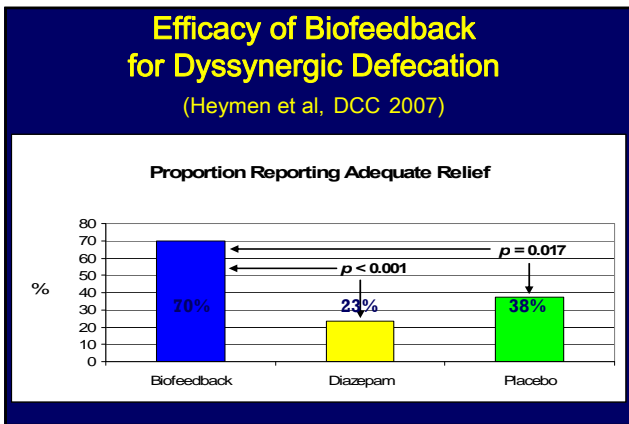
97

Rectoanal Pressure Profiles



105

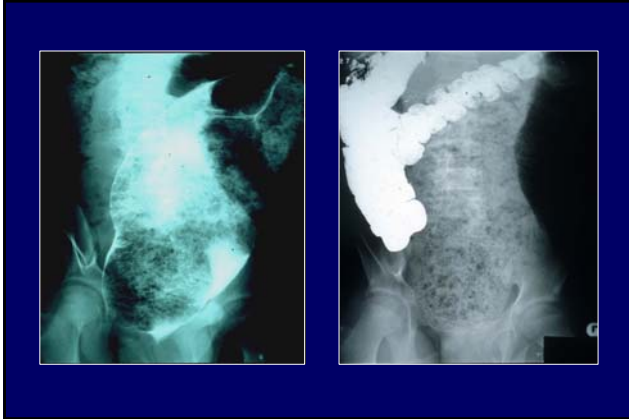




Case 4

A 22 year old man is referred for chronic constipation and abdominal distension. There is no history of fecal or urinary incontinence nor is there a family history of bowel dysfunction. Colonoscopy 4 years earlier revealed melanosis coli and a moderately dilated rectum and colon. An abdominal x-ray reveals dilated bowel filled with stool in the rectum and left colon.

Diagnosis: Functional megacolon



CHRONIC MEGACOLON AND MEGARECTUM

- Children with retentive soiling
- Institutionalized elderly
- Schizophrenia and other psychoses
- Parkinson and other neurologic disorders

TREATMENT OF MEGACOLON / RECTUM

- a. Low fiber diet
 - b. 8 ounce water enemas once or twice/wk
 - c. Small volumes of PEG daily to soften stool
-
- a. Exclusion/ diversion
 - b. Segmental resections (unusual)
