Irritable Bowel Syndrome (Small Groups)

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Semaine canadienne des maladies digestives

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CanMEDS Roles Covered

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X	**Medical Expert** (as *Medical Experts*, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centered care. *Medical Expert* is the central physician Role in the CanMEDS Framework and defines the physician's clinical scope of practice.)
	Communicator (as *Communicators*, physicians form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.)
X	**Collaborator** (as *Collaborators*, physicians work effectively with other health care professionals to provide safe, high-quality, patient-centred care.)
	Leader (as *Leaders*, physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.)
	Health Advocate (as *Health Advocates*, physicians contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.)
X	**Scholar** (as *Scholars*, physicians demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship.)
	Professional (as *Professionals,* physicians are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.)

Conflict of Interest Disclosure

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(Over the past 24 months)
Name: Yasmin Nasser

Commercial or Non-Profit Interest	Relationship
Allergan	Speaker, Investigator

I will discuss the off-label use of medications

Conflict of Interest Disclosure

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(Over the past 24 months)
Name: Adriana Lazarescu

Commercial or Non-Profit Interest	Relationship
Allergan	Speaker, Educational grant

I will discuss the off-label use of medications

Objectives

- To review the updated IBS treatment guidelines
- Describe the current evidence-based pharmacologic and non-pharmacologic therapies for irritable bowel syndrome
- Describe the newest pharmacologic treatments for irritable bowel syndrome

Case

- **56-year-old female referred for a second opinion for abdominal pain, bloating and rectal bleeding**
  - 1 BM q2-3 days using Senokot (up to 6-8 tabs)
  - Uses an enema once a week as does not feel empty
    - No change in bowel habits x 5-6 years
  - Crampy abdominal pain and bloating which worsens when does not stool
    - “I feel like I am 9 months pregnant”
    - **Multiple** presentations to ED for pain and bloating

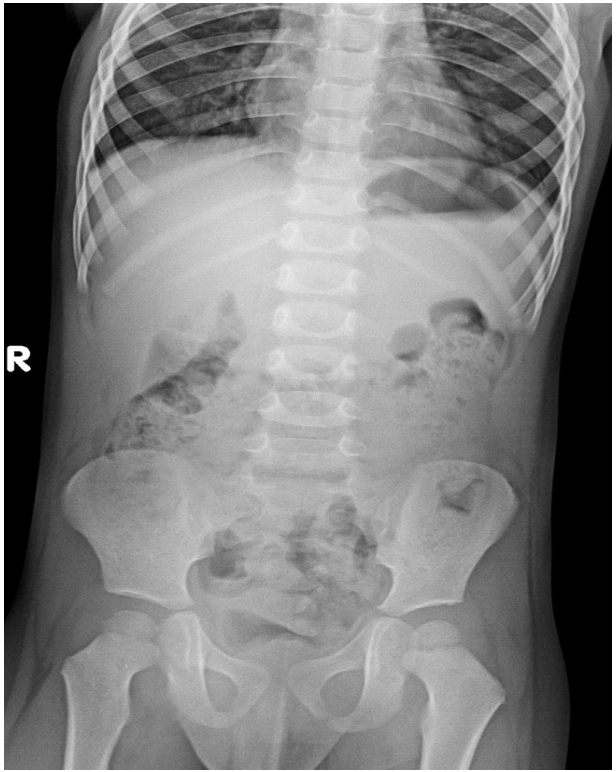
Case (continued)

- **Blood** on the outside of the stool, mainly seen with wiping
  - Hb 132, MCV 92, Ferritin 75
  - Colonoscopy 2 years ago – Grade II haemorrhoids, 2 tubular adenomas (5-7mm), moderate sigmoid diverticulosis
    - Told to increase fiber – “worsened bloating”
- **Past History**
  - GERD, Hypertension (Lansoprazole, HCTZ)
  - Cholecystectomy, appendectomy, TAH/BSO for endometriosis, exploratory laparoscopic examinations for pelvic pain (X2)
  - 1 vaginal birth, use of forceps and episiotomy; 1 caesarian section

Case - Exam

- **Abdominal exam**
  - Cord of stool palpable in LLQ
  - No organomegaly
- **DRE**
  - Anterior skin tag, no external haemorrhoids
  - No masses, brown stool
  - Elevated resting tone, inadequate squeeze

X-ray



https://radiopaedia.org/cases/fecal-loaded-bowel-loops?lang=us

Rome IV Criteria

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- Recurrent **abdominal pain** at least **1 day/week** in the last 3 months associated with ≥ 2:

Onset associated with a change in stool frequency	Onset associated with a change in stool form	**Related to** defecation

Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis

Adapted from Drossman DA, Rome Foundation Lectureship, May 22, 2015

ROME FOUNDATION

Canadian Association of Gastroenterology Clinical Practice Guideline for the Management of Irritable Bowel Syndrome (IBS)

Paul Moayyedi MD[1], Christopher N. Andrews MD[2], Glenda MacQueen MD[3], Christina Korownyk MD[4], Megan Marsiglio MD[5], Lesley Graff MD[6], Brent Kvern MD[7], Adriana Lazarescu MD[8], Louis Liu MD[9], William G. Paterson MD[10], Sacha Sidani MD[1], Stephen Vanner MD[10]

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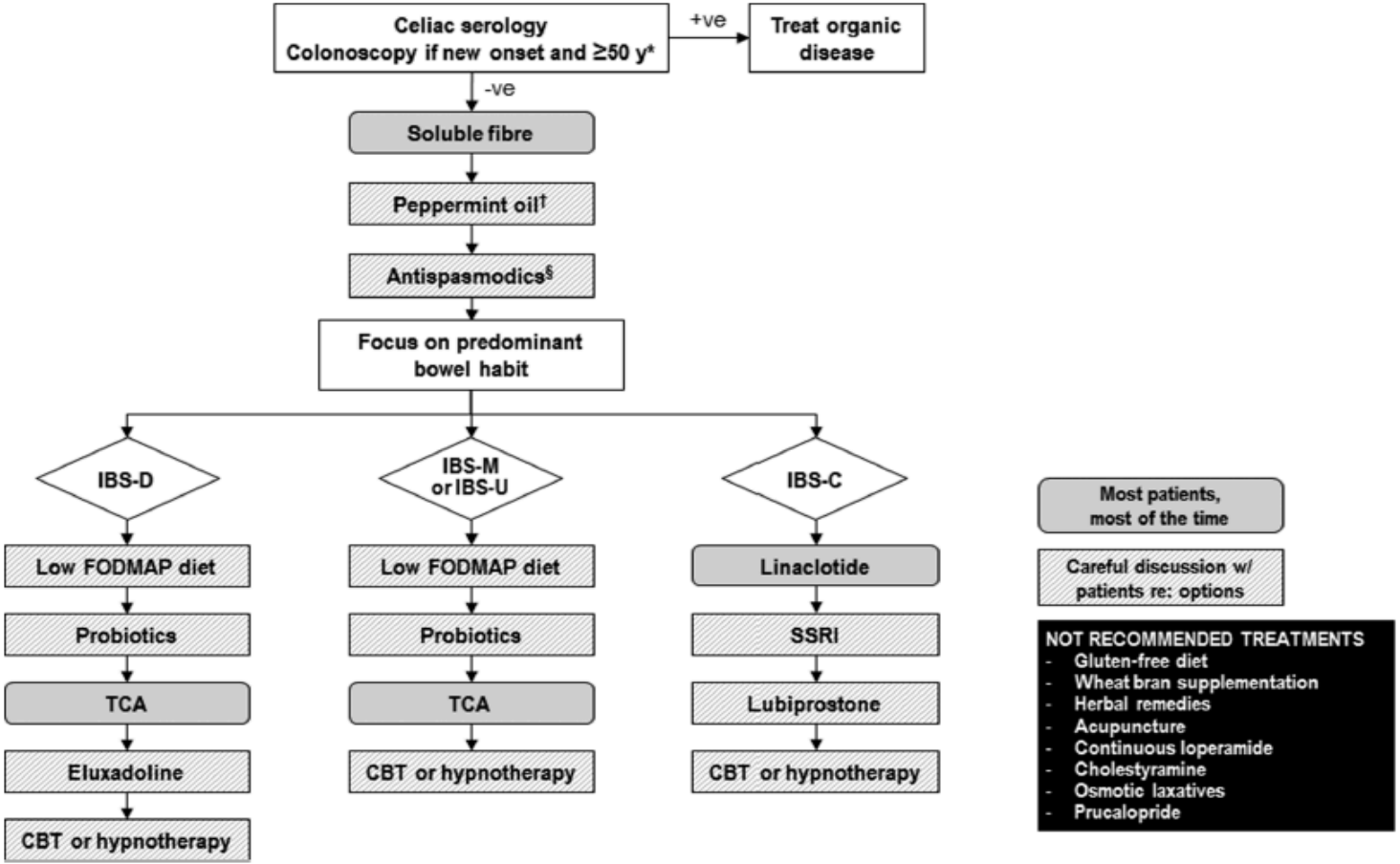
Moayyedi et al. *J Can Assoc Gastro* 2019, 2:6-29



Moayyedi et al. *J Can Assoc Gastro* 2019, 2:6-29

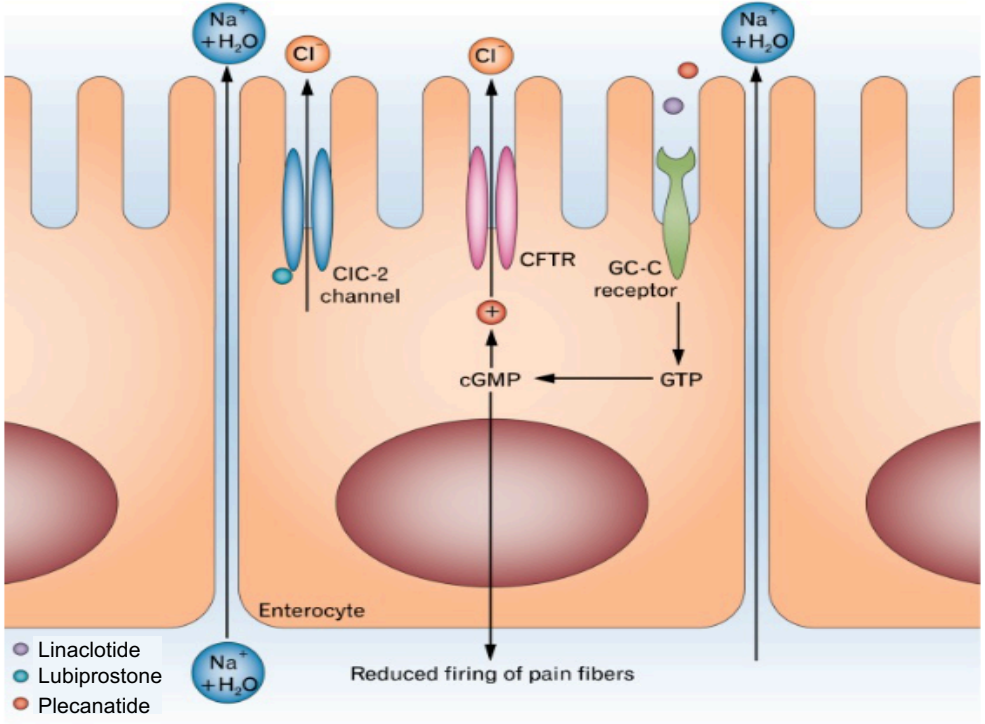
Treatment target: Constipation

IBS-C: The Old

- **Fibre**
  - Benefits are mainly for SOLUBLE FIBRE (psyllium)
- **PEG3350**
  - Improvement in stool frequency, consistency but NOT pain or bloating
- **5HT-4 agonists**
  - Prucalopride (2mg/day)
    - NB evidence is for chronic idiopathic constipation, not IBS-C

Camilleri *et al. Dig Dis Sci* 2016 doi 10.1007/s10620-016-4147-9
Chapman *et al. Am J Gastroenterol* 2013; 108: 1508-1515
Ford *et al. Am J Gastroenterol* 2014; 109 (S1): S2-26
Tack *et al. Aliment Pharmacol Ther* 2012; 35(7): 745-67
Tack *et al. Gut* 2009; 58; 357-365

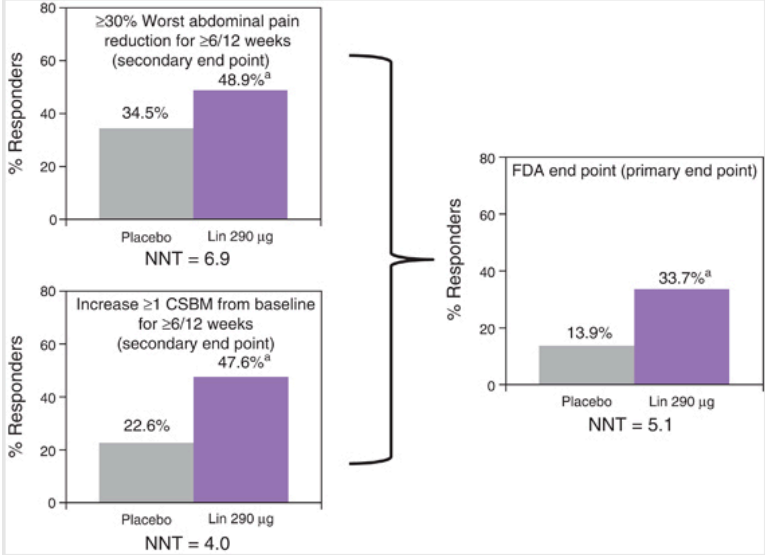
Chloride secretagogues



Eswaran *et al. J Neurogastroenterol Motil* 2014; 20(2):

GC agonists in IBS-C: the old

- **Linaclotide** [145 mcg daily CIC; 290 mcg daily IBS-C]
  - Accelerates colonic transit, enhances chloride secretion and improves symptoms of abdominal pain and bloating



Chey *et al. Am J Gastroenterol* 2012: 107: 1702-1712

Rao *et al. Am J Gastroenterol* 2012: 107: 1714-1724

Network meta-analysis of secretagogues

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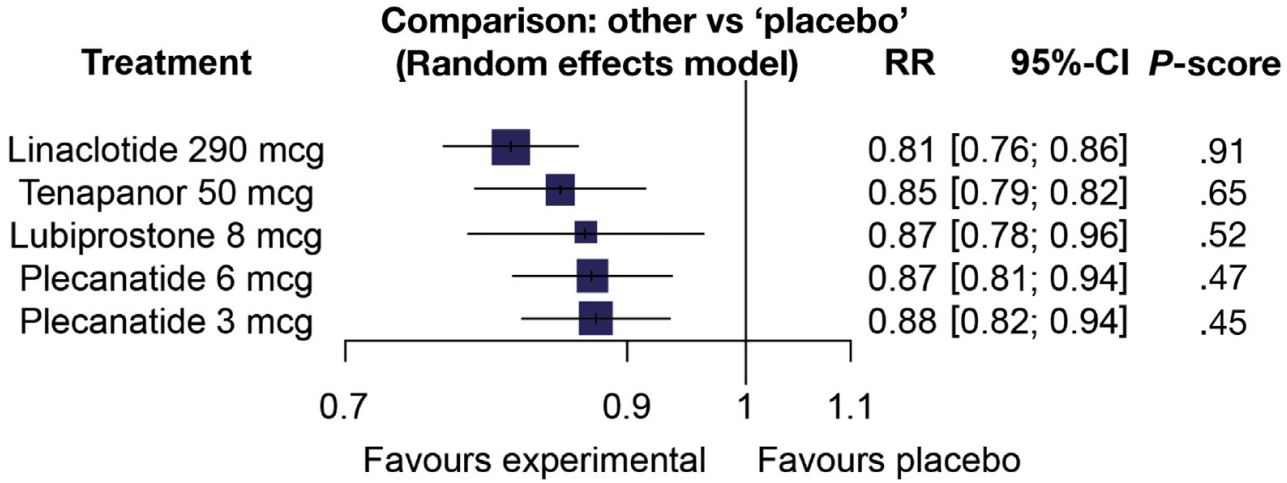
FDA Composite Endpoint



Black CJ *et al. Gastroenterology* 2018;155:1753–1763

Back to Case

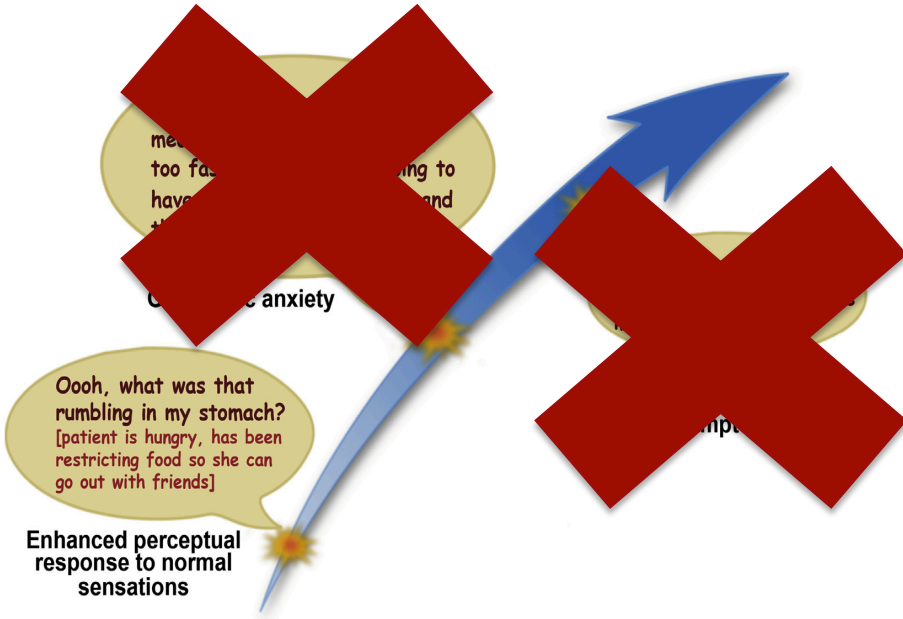
- Trial of soluble fibre/water, 4L colyte + regular PEG and **linaclotide 290mcg**
  - Worked for about ~6 months
  - Prucalopride 2mg added – alternate daily dosing

- Patient endorsed significant life stressors/psychological distress

Treatment target: Psychologic therapies

Treatment – Psychological Therapies

- **CBT/hypnotherapy**
  - [NNT = 4]
    - Moderately effective
    - Home/group therapy non inferior
    - Web/telephone based effective
    - Durability



Everitt *et al. Gut* 2019 doi:10.1136/gutjnl-2018-317805
Flick *et al. Lancet Gastroenterol Hepatol* 2019; 4: 20–31
Ford *et al. Am J Gastroenterol* 2019;114:21–39.

Lackner *et al. Am J Gastroenterol* 2019;114:330–338
Lackner *et al. Gastroenterology* 2018;155:47–57
Sampaio *et al. BMJ Open* 2019;9:e023881
van Oudenhove *et al. Gastroenterology* 2016;150:1355–1367

Psychological Therapies

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- **Consider**
  - Non-responders to medical management
  - Stress/psychological factors contribute to Sx or impair coping
    - Recognize relationship with Sx
    - Motivation
    - Buy in
    - Patient preference

Ford *et al. Gut* 2009; 58: 367-378
Ford *et al. Am J Gastroenterol* 2014; 109 (S1): S2-26
van Oudenhove *et al. Gastroenterology* 2016;150:1355–1367

Treatment target: Pain

Pain and bloating in IBS: The old

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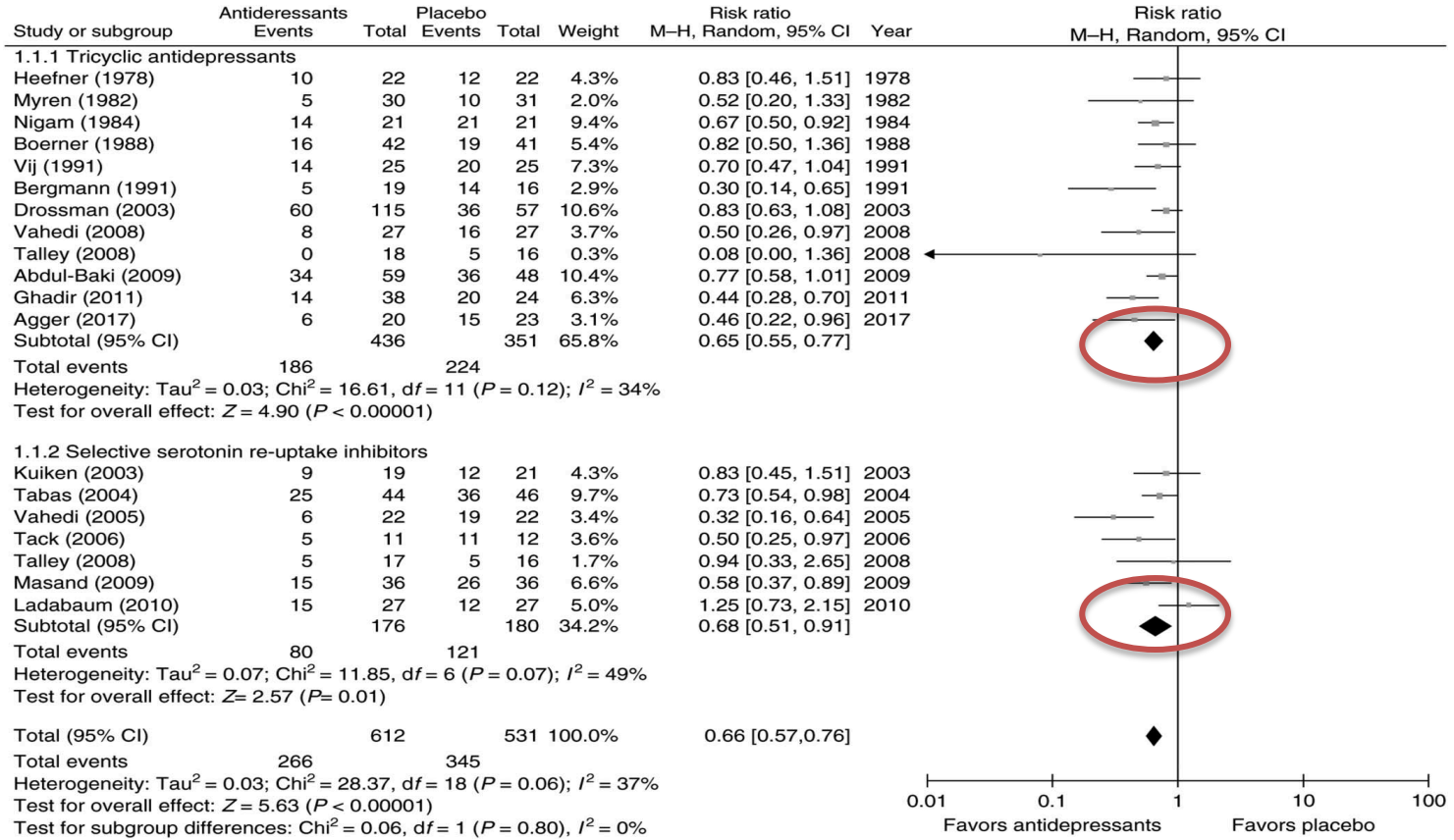
- **Antispasmodics [NNT = 5]**
  - Short term relief
    - LOW quality of evidence

- **Enterically-coated peppermint oil [NNT = 3]**
  - Global improvement of IBS Sx and abdominal pain (NNT = 4)
  - Reflux is the most common side effect
    - MODERATE quality of evidence

Alammar *et al*. *BMC Comp Alt Med* 2019, 19:21-31
Camilleri *et al. Gut* 2017; 66:966-74.
Ford *et al. Am J Gastroenterol* 2014; 109 (S1): S2-26
Moayyedi et al. *J Can Assoc Gastro* 2019, 2:6-29

Pain in IBS - antidepressants

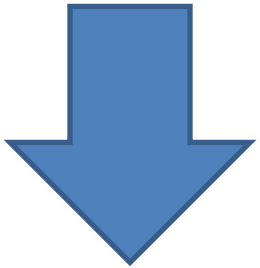


Study or subgroup	Antideressants Events	Total	Placebo Events	Total	Weight	Risk ratio M–H, Random, 95% CI	Year
1.1.1 Tricyclic antidepressants							
Heefner (1978)	10	22	12	22	4.3%	0.83 [0.46, 1.51]	1978
Myren (1982)	5	30	10	31	2.0%	0.52 [0.20, 1.33]	1982
Nigam (1984)	14	21	21	21	9.4%	0.67 [0.50, 0.92]	1984
Boerner (1988)	16	42	19	41	5.4%	0.82 [0.50, 1.36]	1988
Vij (1991)	14	25	20	25	7.3%	0.70 [0.47, 1.04]	1991
Bergmann (1991)	5	19	14	16	2.9%	0.30 [0.14, 0.65]	1991
Drossman (2003)	60	115	36	57	10.6%	0.83 [0.63, 1.08]	2003
Vahedi (2008)	8	27	16	27	3.7%	0.50 [0.26, 0.97]	2008
Talley (2008)	0	18	5	16	0.3%	0.08 [0.00, 1.36]	2008
Abdul-Baki (2009)	34	59	36	48	10.4%	0.77 [0.58, 1.01]	2009
Ghadir (2011)	14	38	20	24	6.3%	0.44 [0.28, 0.70]	2011
Agger (2017)	6	20	15	23	3.1%	0.46 [0.22, 0.96]	2017
Subtotal (95% CI)		436		351	65.8%	0.65 [0.55, 0.77]	
Total events	186		224				
Heterogeneity: $Tau^2 = 0.03$; $Chi^2 = 16.61$, $df = 11$ ($P = 0.12$); $I^2 = 34\%$							
Test for overall effect: $Z = 4.90$ ($P < 0.00001$)							
1.1.2 Selective serotonin re-uptake inhibitors							
Kuiken (2003)	9	19	12	21	4.3%	0.83 [0.45, 1.51]	2003
Tabas (2004)	25	44	36	46	9.7%	0.73 [0.54, 0.98]	2004
Vahedi (2005)	6	22	19	22	3.4%	0.32 [0.16, 0.64]	2005
Tack (2006)	5	11	11	12	3.6%	0.50 [0.25, 0.97]	2006
Talley (2008)	5	17	5	16	1.7%	0.94 [0.33, 2.65]	2008
Masand (2009)	15	36	26	36	6.6%	0.58 [0.37, 0.89]	2009
Ladabaum (2010)	15	27	12	27	5.0%	1.25 [0.73, 2.15]	2010
Subtotal (95% CI)		176		180	34.2%	0.68 [0.51, 0.91]	
Total events	80		121				
Heterogeneity: $Tau^2 = 0.07$; $Chi^2 = 11.85$, $df = 6$ ($P = 0.07$); $I^2 = 49\%$							
Test for overall effect: $Z = 2.57$ ($P = 0.01$)							
Total (95% CI)		612		531	100.0%	0.66 [0.57,0.76]	
Total events	266		345				
Heterogeneity: $Tau^2 = 0.03$; $Chi^2 = 28.37$, $df = 18$ ($P = 0.06$); $I^2 = 37\%$							
Test for overall effect: $Z = 5.63$ ($P < 0.00001$)							
Test for subgroup differences: $Chi^2 = 0.06$, $df = 1$ ($P = 0.80$), $I^2 = 0\%$							

Ford *et al. Am J Gastroenterol* 2019;114:21–39.

Back to Case

- On fibre, PEG BID, linaclotide 290mcg po daily
- Some improvement in bloating/distention with CBT
  - GP started her on an SSRI



Still using enemas, digitally disimpacting, only 2 CSBM/week
Not satisfied with her bowel habit

?Refractory constipation

- 1 vaginal birth, use of forceps and episiotomy
- **DRE**
  - Anterior skin tag, no external haemorrhoids
  - No masses, brown stool
  - Elevated resting tone, inadequate squeeze

Dyssynergic defecation???

Yeah but I don't have access to anorectal manometry in my centre…..

Table 1. Comparison between DRE findings and HRAM results in the diagnosis of dyssynergia in the study patients with chronic constipation. (a) Agreement of DRE findings with HRAM results in the diagnosis of dyssynergia and (b) diagnostic performance of DRE compared with HRAM in the diagnosis of dyssynergia

(a)	HRAM		
	Dyssynergia	Normal	κ (*P* value)
DRE			0.542 (<0.001)
Dyssynergia	193 (93.2%)	19 (41.3%)	
Normal	14 (6.8%)	27 (58.7%)	

(b)		95% CI	
	Estimated value	Lower limit	Upper limit
Sensitivity	0.932	0.905	0.955
Specificity	0.587	0.464	0.690
PPV	0.910	0.884	0.933
NPV	0.659	0.520	0.774

CI, confidence interval; DRE, digital rectal examination; HRAM, high-resolution anorectal manometry; NPV, negative predictive value; PPV, positive predictive value.

Soh *et al. Am J Gastroenterol* 2015; 110:1197–1204
https://www.dreamstime.com/royalty-free-stock-image-golden-finger-image17081026