

Pelvic Floor Dysfunction

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Outline

- What is pelvic floor dysfunction
- Brief, clinically relevant overview of pelvic floor anatomy
- When to consider pelvic floor dysfunction
- Testing
- Treatment

What is pelvic floor dysfunction?

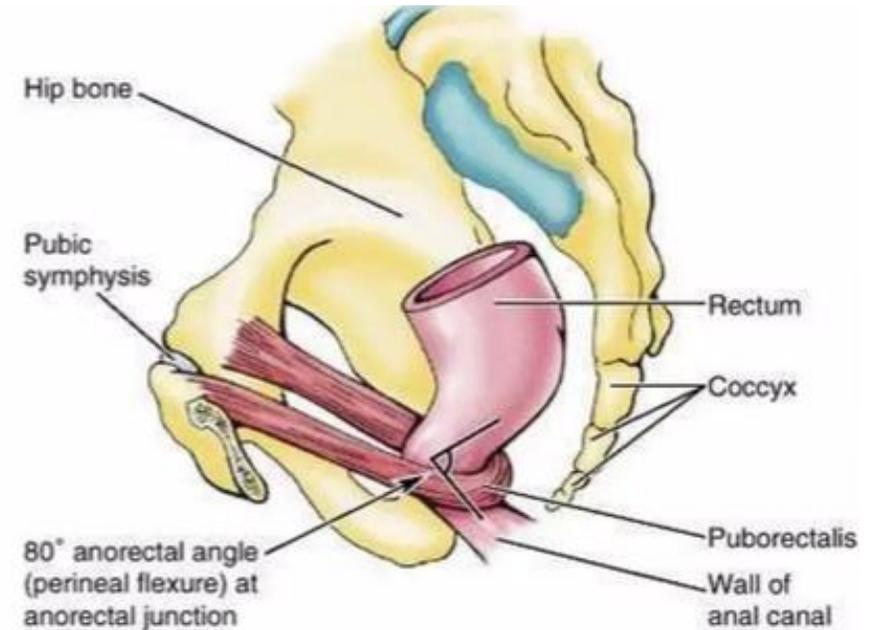
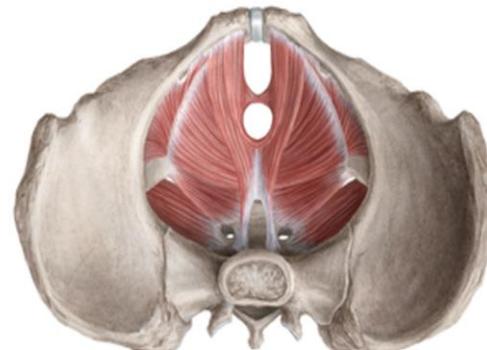
Pelvic floor dysfunction

- Spans multiple specialties, but not just a gyn problem
- Defecation is a coordinated neuromuscular event for all patients
- Pelvic floor dysfunction exists when there are abnormalities at this level resulting in constipation
 - Anatomic abnormalities
 - Muscle coordination problems (dyssynergia)

Broad overview of the pelvic floor

Pelvic floor anatomy: a brief overview

- The pelvic floor serves multiple functions
 - Support for organs
 - Maintains continence and allows for evacuation
- Big players
 - Levator Ani
 - IAS
 - EAS
 - Puborectalis



Crumbie L, Osika A. *Muscles of the pelvic floor: Anatomy and function*. Updated August 15, 2023.

Pelvic floor anatomy: a brief overview

In normal defecation:

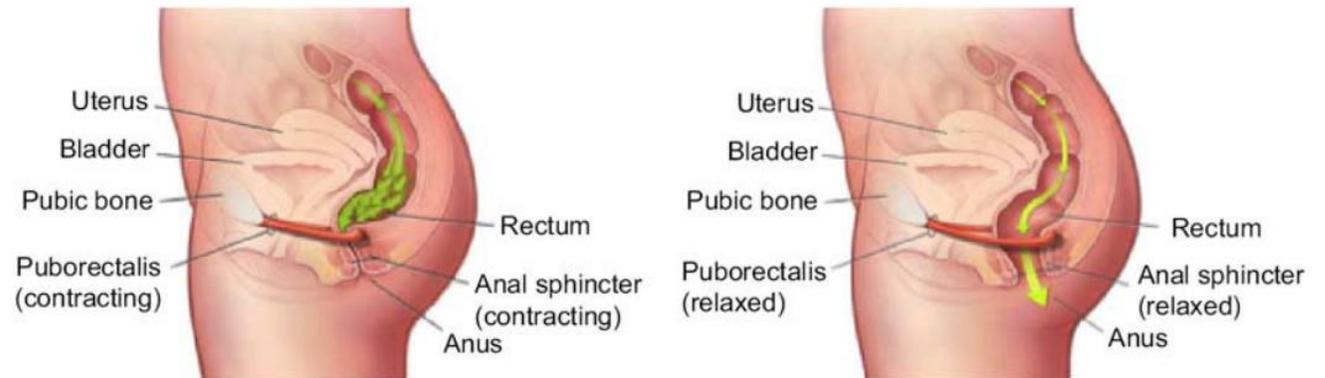
abdominal pressure increases

puborectalis relaxes

pelvic floor descends

hiatus enlarges

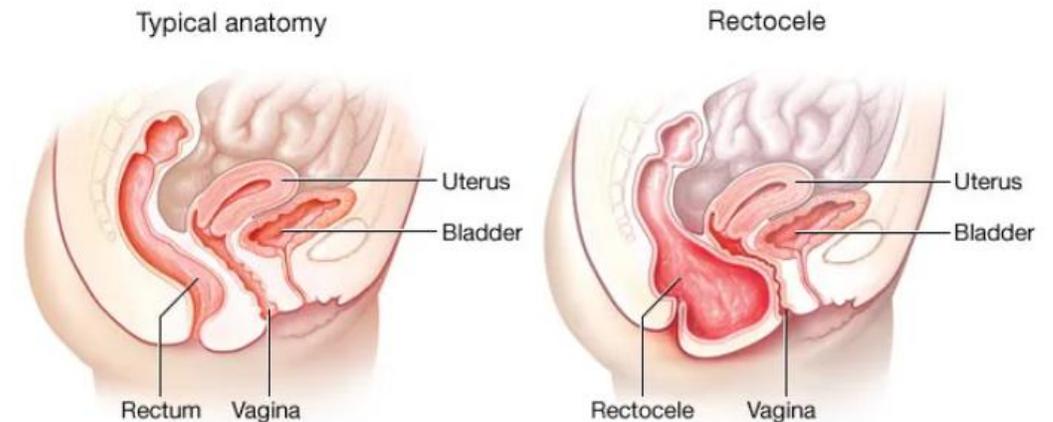
the anorectal angle opens



Staller, Kyle MD, MPH. Refractory Constipation: What is the Clinician to Do?.
Journal of Clinical Gastroenterology 52(6):p 490-501, July 2018.

Evacuation disorders

- Anatomic abnormality that impedes defecation
- Dyssynergia (muscle coordination issue)



Mayo Clinic. *Posterior vaginal prolapse (rectocele) image*, from "Rectocele." Mayo Clinic; updated August 10, 2022.

Dyssynergic defecation (DD)

Inadequate rectal propulsive forces and/or inadequate anal relaxation during defecation.



Likely an acquired behavior
from chronic constipation

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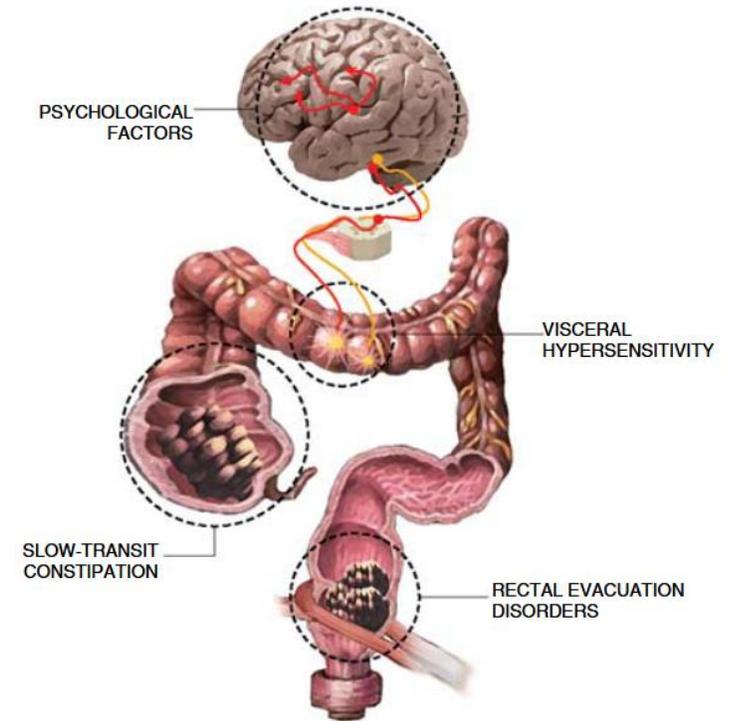
When to consider pelvic floor dysfunction

Resisting medical heuristics

- Pelvic floor disorders are not limited to women who have had vaginal deliveries
- All patients with chronic constipation not responding to conventional therapy should be evaluated for pelvic floor dysfunction prior to being labeled as medically “refractory”

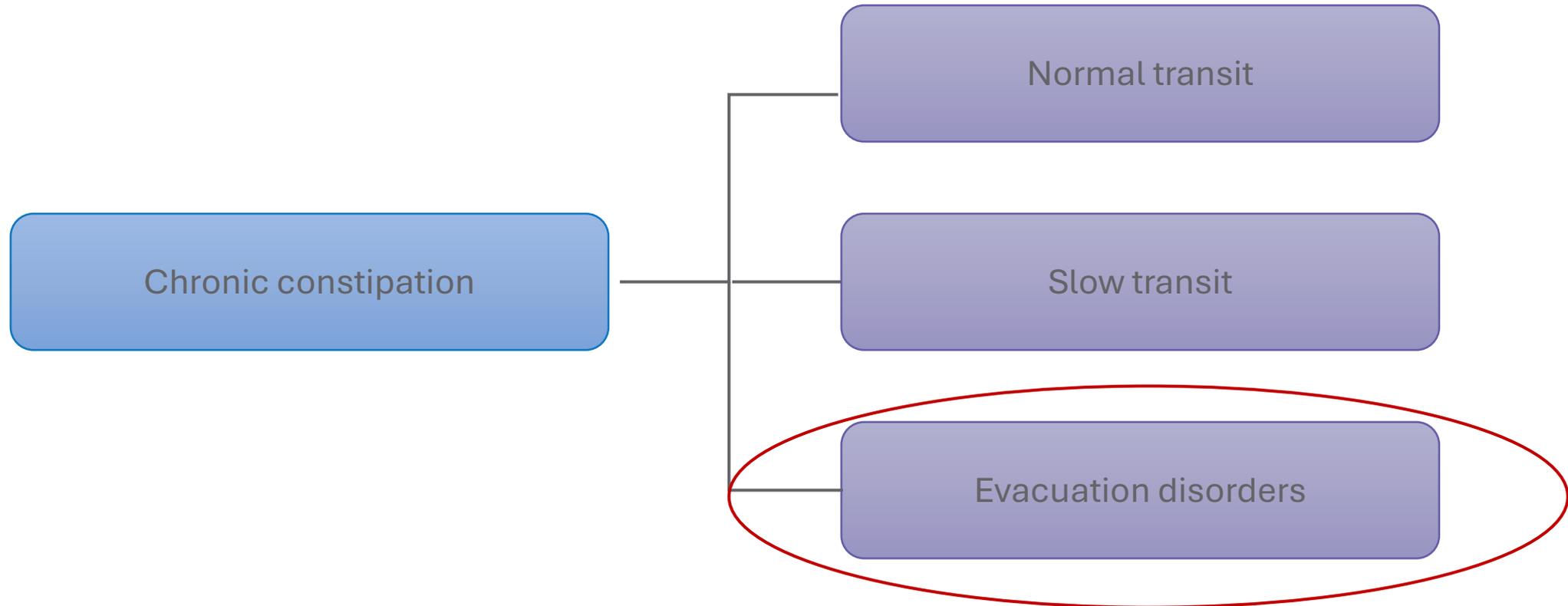
Zooming out on constipation

- Constipation is one of the most common concerns in the GI office
- Close to 3 million Americans seek care for constipation annual
- ~ 40% of patients with chronic constipation have dyssynergic defecation
- Constipation can be complicated and it's helpful to have frameworks



Staller, Kyle MD, MPH. Refractory Constipation: What is the Clinician to Do?.
Journal of Clinical Gastroenterology 52(6):p 490-501, July 2018.

Subtyping



History gathering in constipation

- In addition to stool form and frequency other symptoms (bloating, straining, a sense of incomplete evacuation) are equally important to elicit from patients
- Varied understandings of what it means to be constipated among patients, getting clarity on what the patient is concerned about is important and can help guide the conversation
- Ensure no causes of secondary constipation
- Identify comorbid concerns

Do symptoms help predict pelvic floor dysfunction?

- Excessive straining
- Use of anal digitation/or manual maneuvers
- A sense of anal blockage

Not sufficiently discriminative

Lembo A, Bharucha AE, Dorn SD, et al. American Gastroenterological Association medical position statement on constipation. *Gastroenterology*. 2013;144:211-217.

Wald, Arnold MD, MACG¹; Bharucha, Adil E. MBBS, MD²; Limketkai, Berkeley MD, PhD, FACC³; Malcolm, Allison MBBS, FRACP⁴; Remes-Troche, Jose M. MD, MsC⁵; Whitehead, William E. PhD⁶; Zutshi, Massarat MD^{7,8}. ACG Clinical Guidelines: Management of Benign Anorectal Disorders. *The American Journal of Gastroenterology* 116(10):p 1987-2008, October 2021.

So, in whom do we suspect pelvic floor dysfunction?

Anyone who has failed conventional therapy for chronic constipation should be evaluated

(Behavioral, dietary, OTC laxatives, and in my practice, a secretagogue)

DRE should always be performed in an evaluation of constipation

- The DRE can identify dyssynergia with sensitivity of 75% and specificity of 87%
- For me, a normal rectal exam does not provide enough reassurance that there is no pelvic floor disorder
- But still important to do: look for a mass, pain, obvious abnormality



Rao, S. Digital rectal examination: an invaluable clinical tool. *Gastro Hep Advances*. 2024; 3 (5): 592-593.

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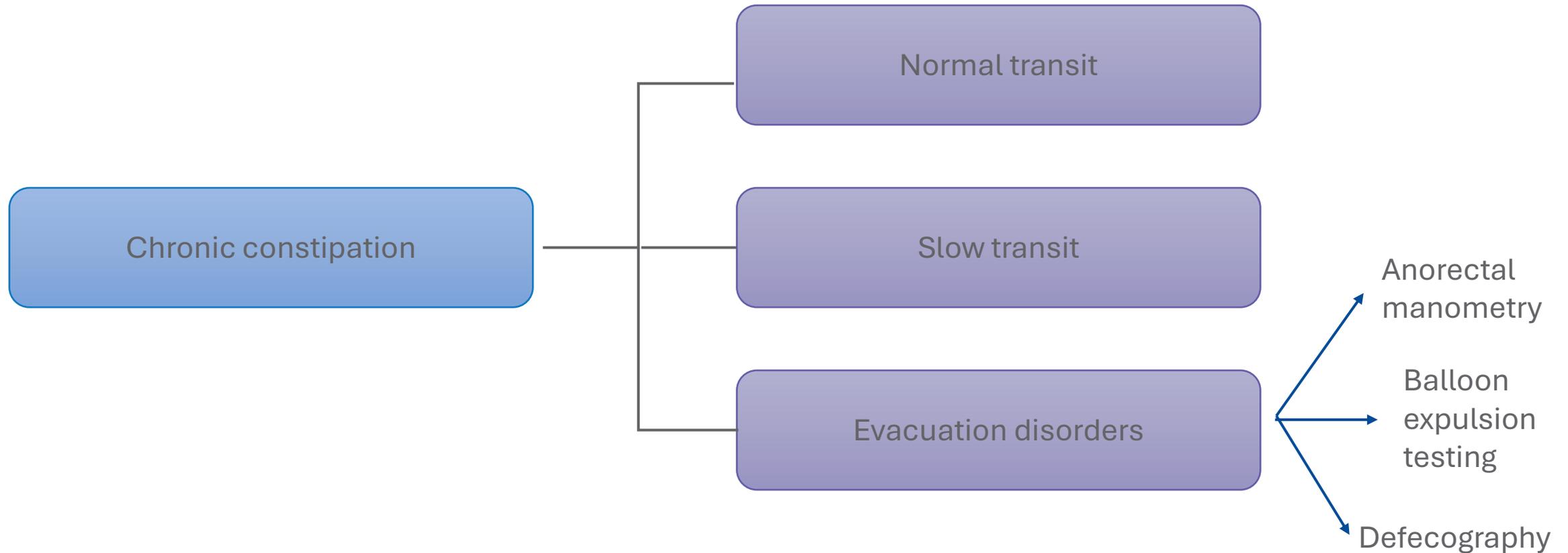
Testing

Dyssynergic defecation can be diagnosed based on findings on:

- Anorectal manometry testing
- Ballon expulsion testing
- Defecography

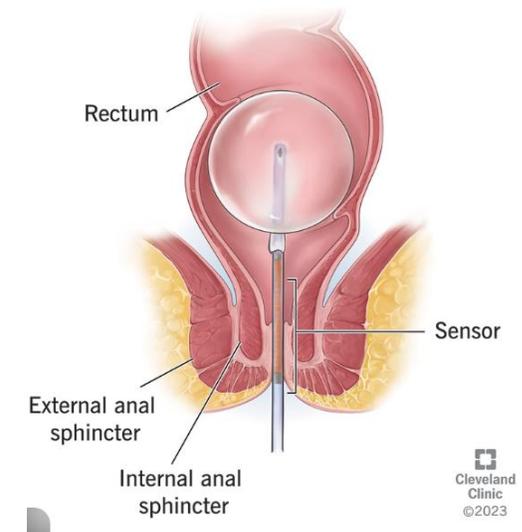
Two out of 3 abnormal tests are typically required to make a diagnosis of dyssynergic defecation.

Testing for pelvic floor dysfunction including dyssnergia



Anorectal manometry

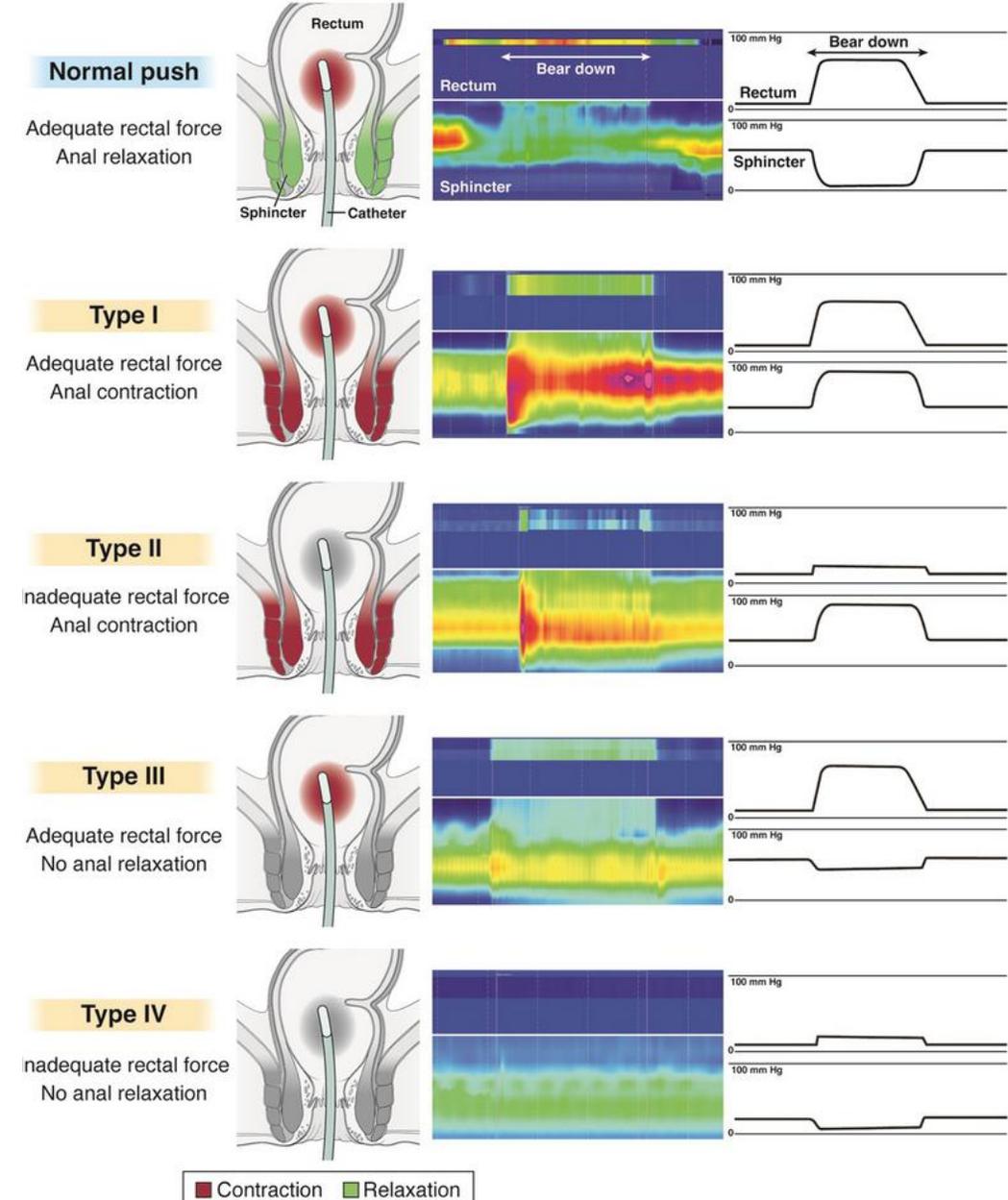
- High resolution catheter with pressure sensors
- Assessment of **coordination between rectal propulsion and anal relaxation.**



Cleveland Clinic. *Anorectal manometry with balloon catheter* [illustration]. Cleveland Clinic; 2023.

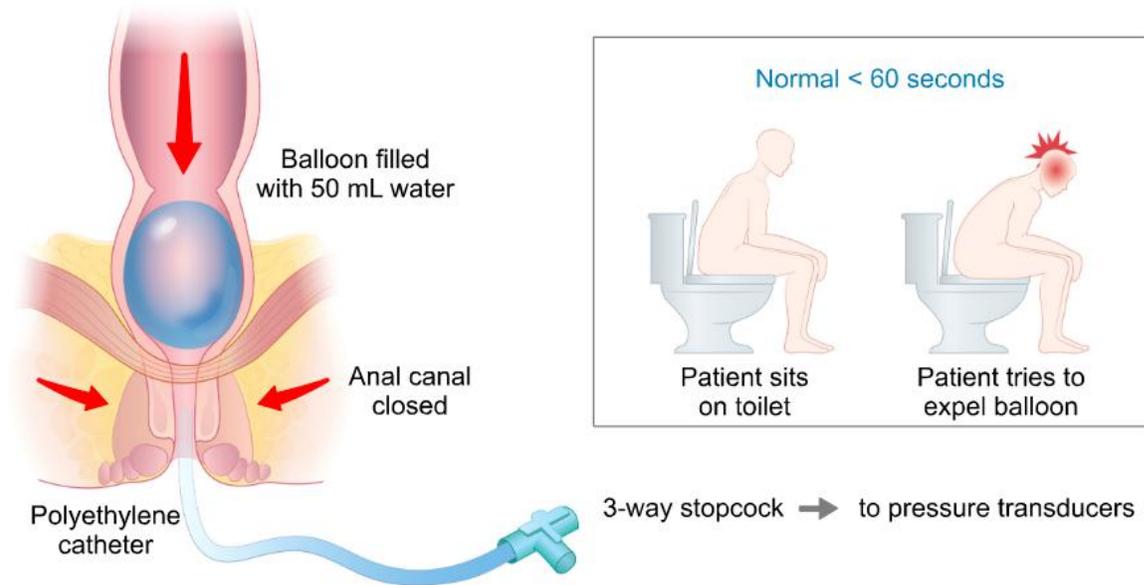
ARM continued

- In normal defecation: rectal pressure increases, anal pressure decreases
- In dyssynergic defecation (DD): anal pressure paradoxically increases or fails to relax during push, rectal pressure may be adequate or inadequate
- Assessing gradient; can subtype based on rectal pressure and anal pressure



Rao SSC, Patcharatrakul T. Diagnosis and treatment of dyssynergic defecation. *Gastroenterology Clinics of North America*. 2016;45(2):247-262.

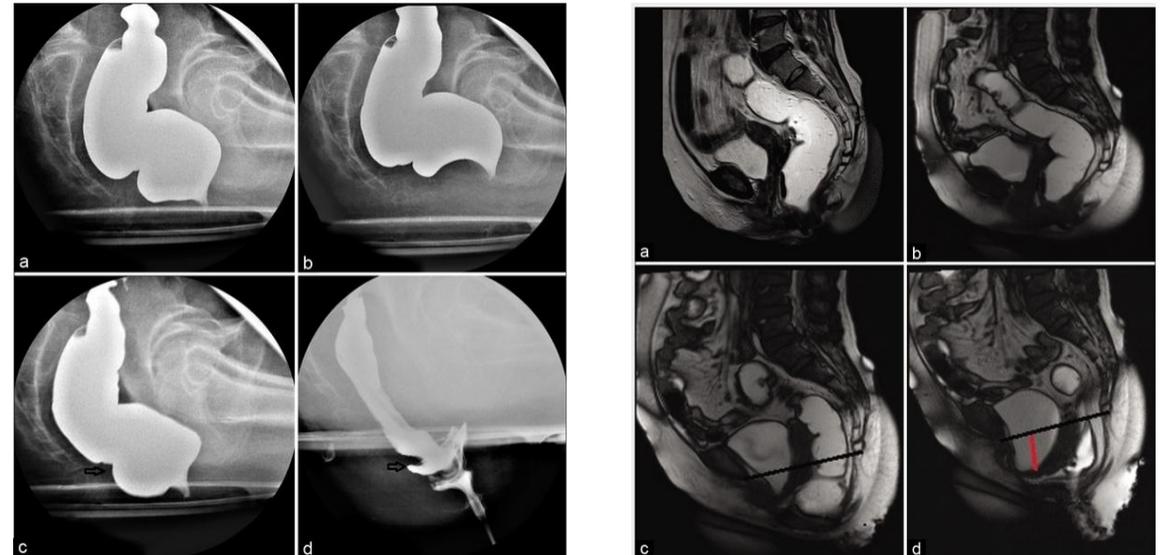
Balloon expulsion testing



Lee, BE. Kim, GH. How to perform and interpret balloon expulsion test. J Neuogastroenterol Motil. 2014; 20(3).

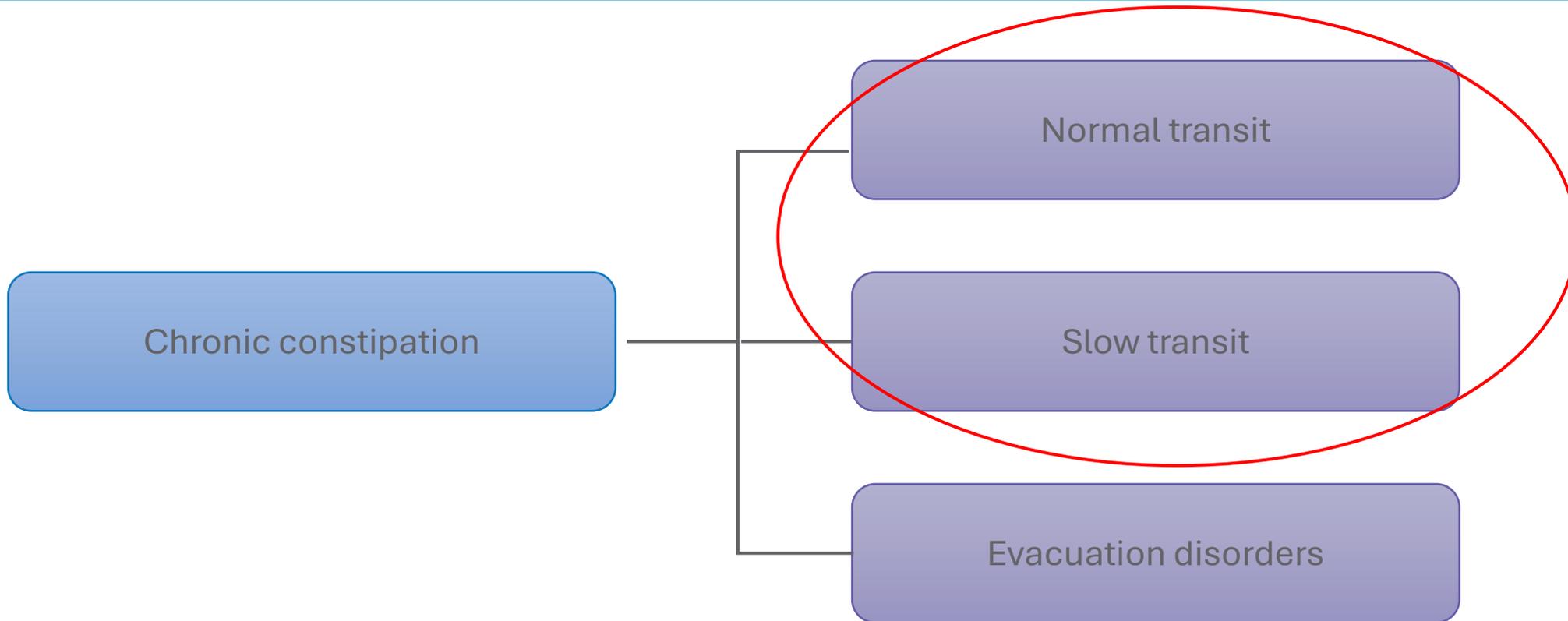
Defecography

- MR vs Barium
- Elucidating anatomy under stress of defecation
- Structural issues – the result or cause of defecatory dysfunction?
- Multidisciplinary management with surgery
- Besides structure, can be helpful when ARM and BET are discordant



Kelvin FM, Maglinte DDT, Benson JT. Pelvic floor dysfunction: dynamic MR imaging. *Radiology*. 1999;210(1):169–174.

A word on transit testing



A word on transit testing

- Sitz marker testing widely available
- 24 radiopaque markers ingested
- Radiograph obtained on day 5
- 5 or more markers, slow transit
- Yes/No test: number or location of markers with no correlation to DD
- Pelvic floor dysfunction may lead to reflex inhibition of transit in more proximal parts of colon



Staller K, Barshop K, Ananthakrishnan AN, et al. Rectosigmoid localization of radiopaque markers does not correlate with prolonged balloon expulsion in chronic constipation: results from a multicenter cohort. *Am J Gastroenterol.* 2015; 110:1049-1055

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Treatment

Pelvic floor PT and biofeedback

- Laxatives will not fix a muscle coordination problem
- Pelvic floor PT with biofeedback therapy
- Biofeedback is device-based training that provides real-time visual or auditory feedback about muscle activity to retrain
 - Randomized trial support
 - Consistent treatment for 6 months
 - Should be undertaken prior to offering surgery
 - Rectal sensory retraining

Surgery

- Can be useful for large anatomic problems in the pelvic floor (intussusception, clinically significant rectoceles, etc.)
- Patients with DD respond poorly to surgery for chronic constipation (colectomy with ileoanal anastomosis or loop ileostomy)

Conclusions

- For patients with chronic constipation, pelvic floor dysfunction should be identified prior to being labeled medically refractory
- Suspect in patients who have failed conventional therapy
- ARM with BET is usually the best test
- Defecography could provide structural clarity
- Biofeedback guided pelvic floor PT should be offered for those with dyssynergia; laxatives alone will not solve the problem