Evaluation and Management of Fecal Incontinence in Adults

Disimpacting the Mystery

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Disclaimer

- No disclosures

Objectives

- Identify the most common etiologies and contributing factors in adults with fecal incontinence
- Recognize diagnostic procedures for the evaluation of fecal incontinence
- Understand conservative and surgical management strategies for adults with fecal incontinence

What is fecal incontinence?

Medical Definition

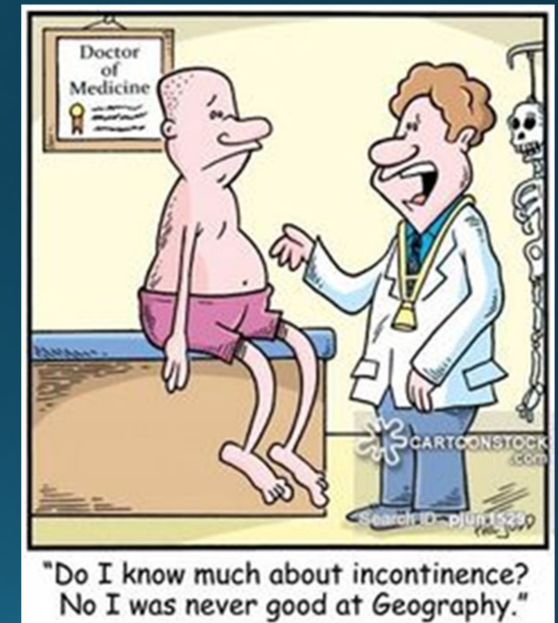
- The inability to control the passage of bowel movements including solid stools, liquid stools, or mucous from the anus.

Patient Definition

- I carry an extra change of clothes
- I wear a pad
- I'm afraid to go out
- I know where every bathroom is in town
- I avoid eating _____ food
- It's embarrassing to talk about

Incidence of Fecal Incontinence

- Devastating non-fatal illness
- 18 million adults in the US suffer from FI
- 10% of women over the age of 45 have at least 1 episode per month
  - Only 28 % of these patients have ever discussed their symptoms with a physician (mostly not voluntarily)
  - Of those who did seek care,
    - over 75 % sought care with an internist or family physician
    - only 7 % discussed their concerns with a colorectal surgeon



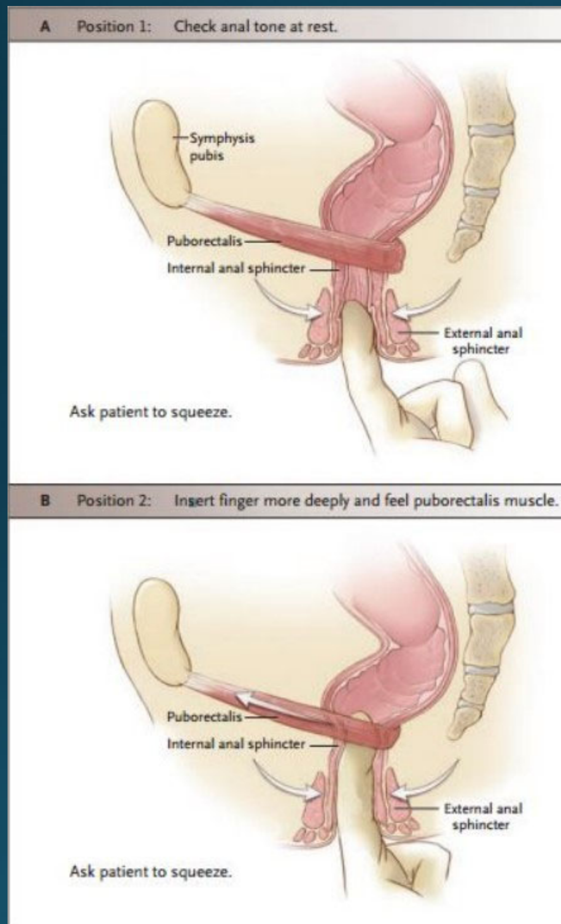
"Do I know much about incontinence? No I was never good at Geography."

Brown Hwet al. Int J Clin Pract. 2012;66(11):1101–8
Brown HW et al. Int J Clin Pract. 2012;66(11):1109–16

Etiologies of Fecal Incontinence

- Prior obstetric trauma (Most Common)
- Sphincter damage from prior anorectal surgery
    - Fistulotomy
    - Lateral internal sphincterotomy
- Denervation of the pelvic floor from pudendal nerve injury during childbirth
- Chronic rectal prolapse
- Neurologic conditions (spina bifida, myelomeningocele)
- Noncompliant rectum
    - inflammatory bowel disease
    - radiation proctitis
- Overflow

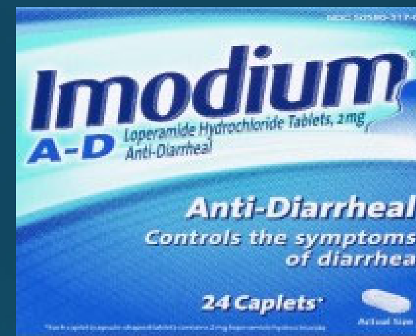
Evaluation of Fecal Incontinence



- History and Physical
  - Inspection of the perineal body
  - DRE
  - Rule out other conditions
    - hemorrhoid/ rectal prolapse, anal fistula, active proctitis
- 2 week bowel diary
- Incontinence scoring systems (Research)
  - Cleveland Clinic Florida (CCF) Incontinence Score, St. Marks Incontinence Score (SMIS), Fecal Incontinence Severity Index (FISI), Fecal Incontinence Quality of Life Scale (FIQOL)

Nonoperative Management

- Lifestyle modification
  - 30-35 g of fiber daily
  - 64-80 oz of water daily
  - Glycerin suppository/saline enema
- Eliminate diarrhea
  - Review home meds
  - Evaluate dietary intake
- Medications
  - Bulking agents
  - Anti-motility agents
  - Bile acid sequestrants
- Biofeedback therapy



Lifestyle Modification

- Bowel regimen
  - Daily fiber supplement like Konsyl or Metamucil
    - Start in am, can switch to pm if ineffective
  - Breakfast with a warm beverage
  - 64oz of water or non caffeinated beverage daily
  - +/- Glycerin suppository or tap water/saline enema after breakfast
  - +/- 2-4mg of Imodium with meals and at bedtime
- Timed toileting

Eliminate Diarrhea

- Medications
  - Metformin
  - Antacids with Mg+
  - Antidepressants (SSRI)
  - Colchicine
- Foods
  - Spicy foods
  - Dairy
  - Caffeine
  - Alcohol
  - Artificial sweeteners
  - Fat replacement (Olestra)

Medications: Bulking Agents

Fiber

- Works by increasing stool bulk
- Types of fiber: Wheat bran, psyllium husk, synthetic celluloses (methylcellulose, polycarbophils)
- 50% reduction in incontinent stools due to improved stool consistency
- Adverse effects: bloating, abdominal pain
  - Usually decreases over time
  - Can be avoided by increasing fiber dose gradually

Medications: Antimotility Agents

Loperamide (Imodium)

- Synthetic opioid
- Acts directly on intestine
- Increases sphincter tone and resting pressure, increases RAIR threshold
- Reduces urgency, stool volume and frequency of bowel movements
- No addiction potential

Diphenoxylate (Lomotil)

- Opioid derivative
- Crosses blood brain barrier (mild euphoria)
- Atropine is added to minimize the overdose and abuse potential
- Less potent than loperamide

Medications: Antimotility Agents

- Bile Acid Sequestrants: Cholestyramine, Colestipol, Colesevelam
- Bismuth Subsalicylate (Pepto-bismol)
- Amitryptiline
- Ondansetron

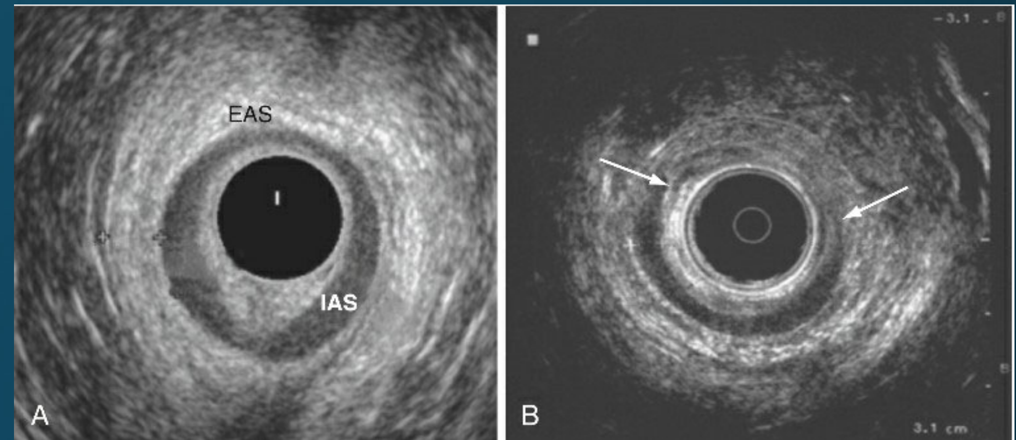
Biofeedback Therapy

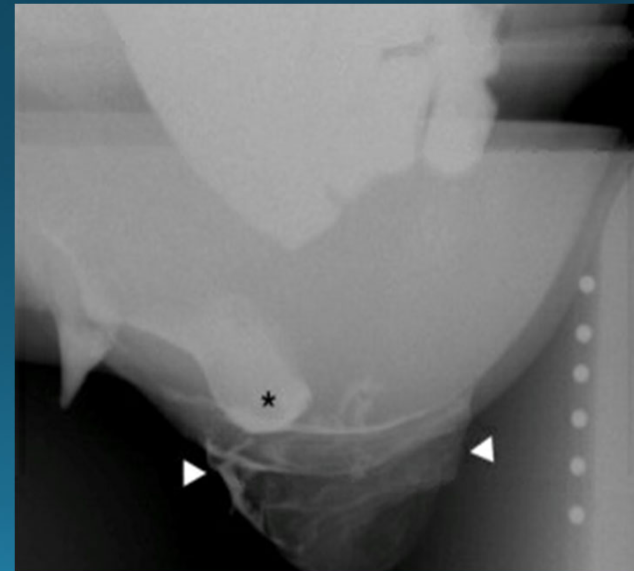
- Training regimen for pelvic floor
  - Strength and endurance for pelvic floor and anal sphincter
    - Provides information on how strong muscles are contracted
    - Learn how to do more effective exercise
  - Improves sensitivity or compliance
    - Earlier detection of small volume stools
  - Coordination training for sphincter
    - Learn to recognize IAS relaxation
    - Taught to voluntarily contract EAS

Testing

- Anorectal physiology testing
- Pudendal nerve terminal motor latency
- Endoanal ultrasonography
- Defecography
- Anal electromyography (EMG)

Helps to guide therapy but do not predict response to therapy





Surgical options for FI

- Repair
  - Sphincteroplasty
- Stimulation
  - Sacral neuromodulation
- Augmentation
  - Injectables
  - Radiofrequency (Secca Procedure)
- Replacement
  - Graciloplasty
  - Magnetic sphincter
  - Artificial bowel sphincter
- Fecal Diversion

Repair (Sphincteroplasty)

- **Candidate**: those with severe FI + sphincter defect
- **Complications:** wound healing and high risk for post operative infection
- **Downsides**: Limited efficacy over time

Augmentation (Injectables)

- **Candidate:** those with mild FI + sphincter dysfunction
- **MOA:** Increases anal resting pressure by restoring or bulking anal cushions and improving sphincter muscle volume
- **Downsides:** concern for migration of bulking material, no standard approach for amount, location, material or mechanism of injection

Radiofrequency (Secca Procedure)

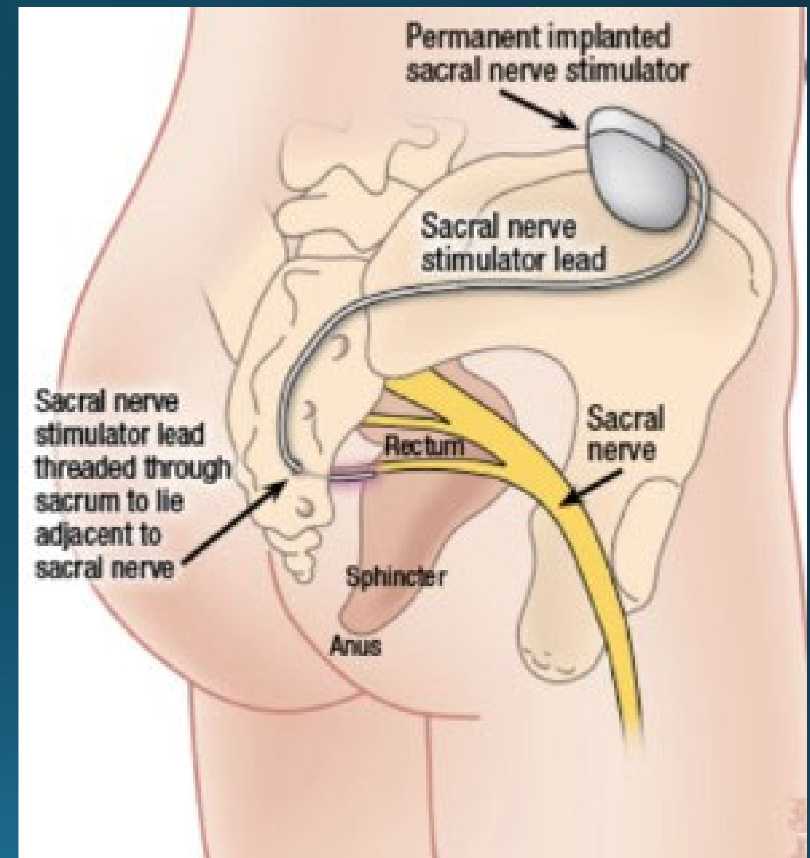
- **Candidate:** those with mild/moderate FI without sphincter defect
- **MOA:** Use of radiofrequency to generate Thermal energy which stimulates collagen contracting and tightening
- **Complications:** bleeding and ulceration at application site
- **Downsides:** Limited studies with small sample size and length of follow up

Replacement

- Graciloplasty
  - **Candidate:** those with FI from trauma or congenital anomaly
  - **MOA:** Improves FI by adding muscle bulk
  - **Complications:** evacuatory dysfunction, pain with muscle contraction, infection
- Artificial Sphincter
  - **MOA:** Provides continence with the use of a cuff that pumps fluid to/from a reservoir
  - **Downsides:** patient dexterity, perineal erosion from device
  - **Complications:** infection, device failure

Stimulation (sacral neuromodulation)

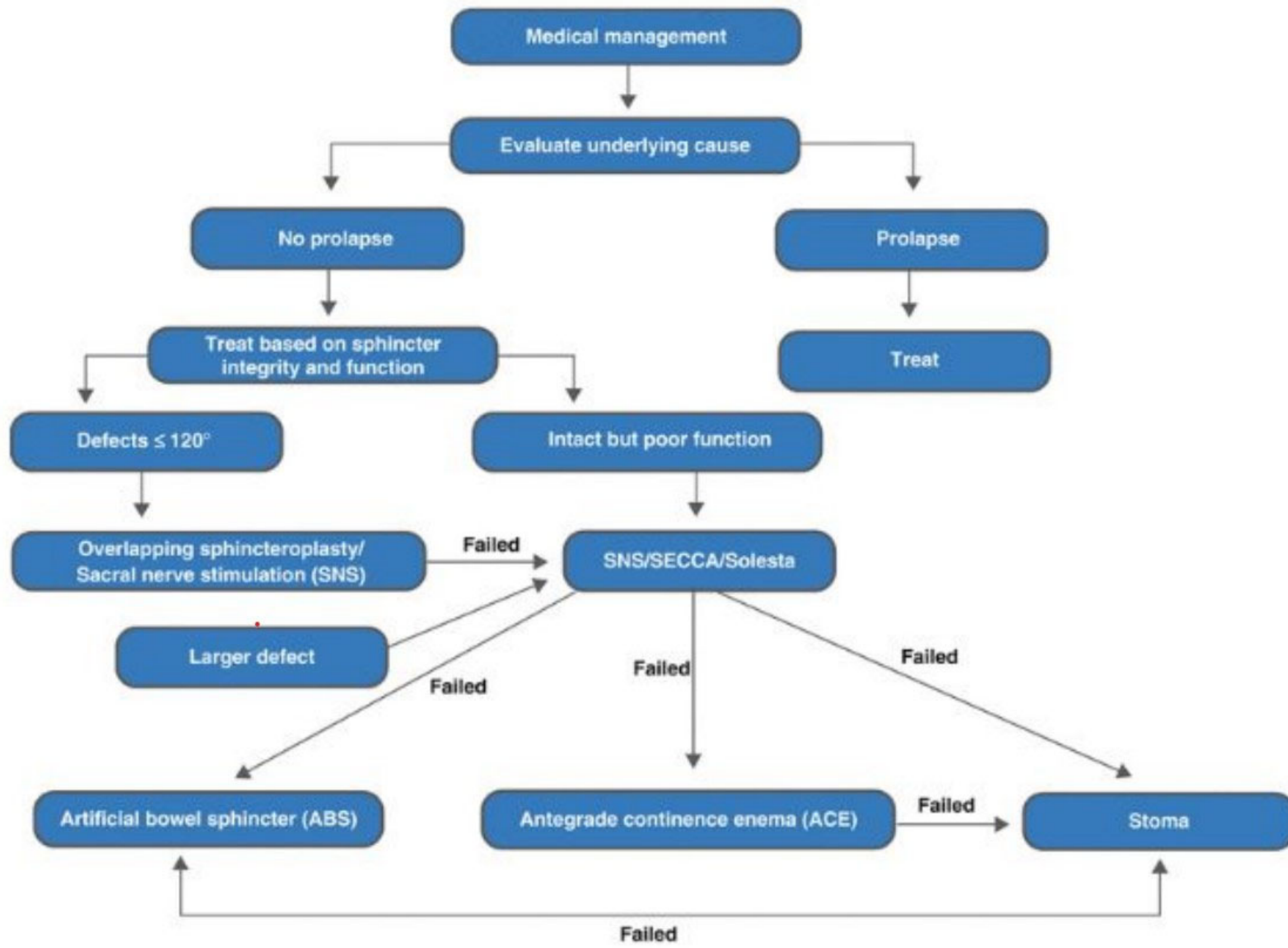
- **Candidate:** those with FI without significant sphincter defect
- **MOA:** Direct stimulation of sacral nerves is thought to recruit additional inactive motor nerves to improve muscle strength- → increase in resting anal pressure
  - 50-80% reduction in incontinent episodes
- **Complications:** rare, lead migration
- **Benefits:** avoids incision around the anal canal
  - Reduces risk of infection
  - Avoids further anal scarring
- Can be a staged procedure



Fecal Diversion (Colostomy or Ileostomy)

- **Candidate:** those in whom all other reasonable treatment options have been exhausted
- **Colostomy**
  - Usually end sigmoid colostomy
- **Ileostomy**
  - Best for those with chronic constipation or slow transit
- **Complications:** parastomal hernia, pouching, emotional/physical adjustment, dehydration (ileostomy)

- Last resort
  - Important to provide education and emotional support


Medical management
Evaluate underlying cause
No prolapse
Prolapse
Treat based on sphincter integrity and function
Treat
Defects ≤ 120°
Intact but poor function
Overlapping sphincteroplasty/ Sacral nerve stimulation (SNS)
Failed
SNS/SECCA/Solesta
Larger defect
Failed
Failed
Failed
Artificial bowel sphincter (ABS)
Antegrade continence enema (ACE)
Failed
Stoma
Failed