Treatment of Fecal Incontinence 2016

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**Definition**

- Uncontrolled passage of feces or gas over at least 1 month’s duration, in an individual of at least 4 years of age, who had previously achieved control

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Epidemiology

• Reported prevalence 1.4% - 18%
• Women > 45y, 20% 1/year, 9.5% 1/month

• 2nd cause to Institutionalize an old person
• In institutionalized patients - 50% have FI

**Fl Severity Scoring**

- Fecal Incontinence Severity Index
- St. Marks Incontinence Score
- Cleveland Clinic Florida Fecal Incontinence Score
- Fecal Incontinence Quality of Life scale


Medical Management
Dietary

• Co-existence of diarrhea should be investigated

• Effects of caffeine, sugar replacements, lactose etc. - fecal urgency

• Supplemental fibers to thicken stool consistency

• 22% - 54% of patients can have improvement in FI with formal counseling from a specialist regarding dietary habits
Supportive measures

Skin care:

- Protective ointments - zinc oxide based
- Gentle soaps & wipes
- Deodorants & pads
Medications

- Adsorbents - **Kaopectate**
  absorbing excess fluid in the stool
- Antidiarrheal agents – **loperamide / diphenoxylate-atropine**
- Tricyclic antidepressants
- Opioids
- Clonidine
- Emptying the rectum by using enemas
Biofeedback

- Biofeedback should be considered as an initial treatment for patients with incontinence and some preserved voluntary sphincter contraction

- Goal: improve sensation, coordination, strength

- 64% - 89% improvement in incontinence episodes
Biofeedback Training Device
Surgical Management
Sphincter Repair

• Sphincteroplasty for defects caused by obstetric injury good-excellent short-term results - 85%
• After 5 years, 10% - 14% of patients had sustained improvement
• Questionable value of sphincteroplasty, especially in women who develop incontinence decades after any obstetric trauma

Sphincter Repair

• Repeat repairs are unlikely to be more successful
Direct Sphincter Repair
Apposition & Overlapping
Postanal Repair

• Not recommended - has not shown any or only questionable benefit

• 33-50% success rates
Park`s postanl
Repair - I
Park`s Postanal Repair - II
Gracilis Muscle Transposition

42-85% success
Stimulated Gracilis Muscle Transposition
Gracilis Muscle Transposition
Final Results
Injection of Bulking Agents

- May help to decrease episodes of passive fecal incontinence
- Role for patients with **mild incontinence**
- **Injection sites** - intersphincteric space vs. submucosal
- **Techniques** - ultrasound guided vs. blind
- Results of these studies (24) have been inconsistent and difficult to interpret owing to the multiple compounds and injection techniques that have been used
- **No** study evaluated the **long-term benefits** of these therapies
Injection of Bulking Agents

Substances:
• Polytetrafluoroethylene paste – 1993
• Autologous fat
• Synthetic bovine dermal collagen
• Teflon
• Silicone (PTQ)
• carbon beads
• stabilized hyaluronic acid
Injection of Bulking Agents

- Little evidence was present to support the use of perianal bulking injection for FI
  - Hyaluronic acid dextranomer gel (NASHA Dx) - 2011
  - Decrease in symptoms in 52% of patients at 6 months and at 36 months

Injectable Bulking Agents
Bioplastique implant
Injection Technique
Radiofrequency Energy Delivery

Significant sphincter muscle remodeling marked by:

• Increased smooth muscle / connective tissue ratio

• Increased collagen I compared with collagen III content

• Decrease in the number of interstitial cells of Cajal
Radiofrequency Energy Delivery

SECCA procedure:

- 220 patients. 10 studies
- 12m, 55% - 80% responders some improvement in CCF scores

The SECCA Procedure
Sacral Neuromodulation

First-line surgical option for incontinent patients with and without sphincter defects

Modulate rectal sensation by:
• Activating or deactivating chemical mediating receptors
• Stimulating the afferent pathway
• Changing brain activity relevant to the continence mechanism

Sacral Neuromodulation
Test your Patients before Implant

Staged Test

If inconclusive

Test with PNE

If successful

Test

Implant
Sacral Neuromodulation
Sacral Neuromodulation

Per protocol (stage 2):

- **Short term** (0–12m) ≥50% improvements in weekly FI episodes - 79%
- **Long-term** (> 36m) ≥50% improvements in weekly FI episodes - 84%

ITT analysis – (stages 1+2):

- **Short term** (0–12m) ≥50% improvements in weekly FI episodes – 63%
- 35% of patients achieve 100% continence at long-term follow-up


Sacral Neuromodulation

• Good safety profile

• Infection rate - 10.8%

• At 5y, 24.4% of patients required at least 1 revision or replacement

Sacral Neuromodulation

- Sphincter injury - CCF incontinence scores from 16.5 → 3.8
- Success has been reported in patients with defects of up to 120°
- Sphincter defect, pudendal neuropathy, or a Hx of a previous sphincter repair did not decrease the efficacy of SNM
Percutaneous Tibial Nerve Stimulation

- Electrical stimulation to the posterior tibial nerve in multiple successive treatments
- Median decrease of 4 points from pretreatment CCF scores
- Median change of 4 episodes per week in short-term follow up

Artificial Bowel Sphincter

- 59% of devices were still functional at 5-year follow-up

ABS is generally reserved for:
- Patients in whom all other treatments have failed
- Extensive sphincter destruction >180°
- Congenital malformations
- Neurogenic incontinence from spinal cord injury
- Postsurgical significant bowel dysfunction with intact anal canal anatomy


Artificial Bowel Sphincter

High rate of complications:

- Infections (acute and chronic)
- Device erosions
- Anorectal ulcerations
- Device malfunction secondary to leaking of fluid from the device
- Device migration
- Pain
- Constipation


AMS Artificial Sphincter
Artificial Bowel Sphincter

- anal band
- activator balloon
- calibration port
- valve
Creation of a Stoma

• **83%** of patients with FI who had a permanent colostomy - significant improvement in lifestyle

• **84%** of the patients would choose to have the stoma created again


**Magnetic Sphincter**

- String of titanium beads with a magnetic core that is implanted to encircle the anus
- Preliminary evaluations from pilot studies - fairly good efficacy despite lower closing pressure


Implanted around anal canal to maintain closure

Expands to allow stool passage, then reapproximates
Anal continence plug