

Faecal incontinence

Andrea Warwick

MBChB, MSc, FRCSEd, FRACS, EBSQ
(coloproctology), CSSANZ

Colorectal Surgeon



Common Problem

- A symptom not a diagnosis
- Faecal incontinence is common:
 - 10-20% in the community
 - 18-33% in hospitals
 - 50-70% in nursing homes
- Prevalence is often underestimated due to patients' reluctance to report symptoms.
- Faecal incontinence costs \$1,127million per year to care for in Australia.

Meyer et al. *Women's Health*. 2015;11:225-238.
Saldana Ruiz et al. *World J Gastroenterol*. 2017;23:11-24

Quality of Life

- Restricts social life
- Hygiene/odour issues
- Physical activities
- Embarrassment
- Anxiety and depression
- Poor self-esteem
- Problems with sexual relationships

Variable concern

- Primary school teacher with occasional flatus incontinence
- Farmer with large volume daily urge faecal incontinence
- Golfer with post defaecatory leakage

Causes of faecal incontinence

- **Diarrhoeal states**
 - Infectious
 - IBD
 - Short SB/ Previous colectomy
 - Radiation enteritis
 - Drugs
 - Endocrine disturbances
 - Overflow
 - Malignancy
 - Post cholecystectomy
 - Pancreatic insufficiency
 - Poor diet
- **Neurological conditions**
 - Central – DM / MS / PA
 - Peripheral – eg injury
- **Abnormal pelvic floor**
 - Congenital anorectal malformations
 - Trauma/ surgery/obstetric
 - Descending perineum
 - Pudendal neuropathy
 - Dysynergia
- **Prolapse**
 - Full thickness rectal prolapse
 - Internal rectal prolapse
 - Rectocele
 - Enterocele
- **Rectal capacity disturbances**
 - Post rectal surgery (LARS), pouch
 - Radiation proctitis, IBD
 - Failure to evacuate / hard stool in rectum

- Stool abnormality
- Functional abnormality
- Anatomical abnormality

Initial assessment

- History
- Examination – if you don't put your finger in it you'll put your foot in it



Initial assessment

- Blood tests – FBC, U+E, LFTs, TFTs, CRP, Coeliac serology
- Stool tests – MC+S, faecal elastase, ?Calprotectin, ?FOBT

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Treatment

- Treat causes of loose stool
- Behavioural advice
- Dietary modifications- high fibre, low caffeine, cut aspartame
- Stool modification – psyllium husk, low dose loperamide
- Lose weight
- Pads/ flatulence absorbing underwear
- Skin barrier creams
- Medication management - metformin
- Thyroid management
- Cholestyramine post cholecystectomy
- Creon if pancreatic insufficiency
- Pelvic floor muscle exercises/ physiotherapy

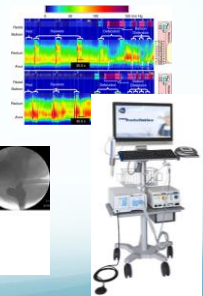
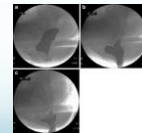
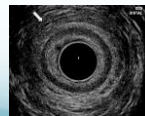


Referral

- If any red flag symptoms – COBH/ bleeding - refer for colonoscopy
- If initial management does not improve symptoms refer for
 - Consideration of further diagnostic tests
 - Consideration of more advanced treatments

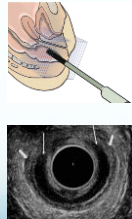
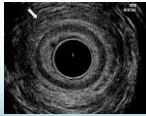
Tests

- Endo-anal USS
- Manometry
- EMG
- Defaecating proctogram



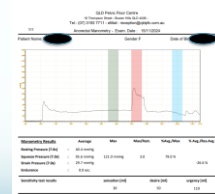
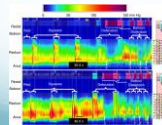
Tests

- Endo-anal USS



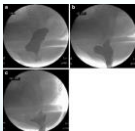
Tests

- Manometry
- Rectal sensation testing
- EMG



Tests

- Defaecating proctogram
 - Can be fluoroscopic or MR proctography



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 - Traumatic - Obstetric anal sphincter injury
 - Surgical eg sphincterotomy, anal stretch, fistulotomy
 - Non-traumatic
 - Rectal capacity disturbances
 - Post rectal surgery (LARS), pouch
 - Radiation proctitis
 - IBD

Sphincter defects

- Diarrhoeal states
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 - IBD

Obstetric anal sphincter injury

- 3% of all Australian women who have a vaginal birth
- 5% of women having their first vaginal birth
- 14% risk if forceps used
- Regional differences
- Higher than other similar countries
- 0.1% in China, Cambodia, India.... Hirayama et al 2013

- Differences in maternal and fetal risk factors (Table 1)
- Differences in the rate and type of instruments used (forceps or vacuum extractors). The risk is approximately doubled in an instrument assisted birth (forceps or vacuum extraction)
- Differences in the rate and type of episiotomy
- Changes to other practices during the second stage of labour, such as the woman's position during birth, support of the perineum as the baby's head emerges and the speed of the birth of the baby's head
- Better recognition and reporting of third and fourth degree perineal tears
- Differences in health service policies and guidelines on perineal care and clinical practice, including the recognition and detection of perineal tears
- Differences in clinical experience

NSQHS 2021

Obstetric anal sphincter injury

- Recent meta-analysis
- 103 studies involving 16,110 women
- After all vaginal deliveries
 - OASIS were diagnosed on ultrasound in 10-26 %
 - 19 % experienced faecal incontinence
- Following primary repair of OASIS
 - 55 % of women had persistent sphincter defect
 - 38 % experiencing faecal incontinence

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Risk of obstetric anal sphincter injuries (OASIS) and anal incontinence: A meta-analysis

Background: Obstetric anal sphincter injuries (OASIS) are a common complication of vaginal birth, leading to anal incontinence. This meta-analysis aims to assess the risk of OASIS and anal incontinence following primary repair. Methods: A systematic search of the literature was conducted to identify studies reporting the risk of OASIS and anal incontinence following primary repair. Results: The meta-analysis included 103 studies involving 16,110 women. The overall risk of OASIS was 10-26%, and the overall risk of anal incontinence was 19%. Following primary repair of OASIS, 55% of women had persistent sphincter defect, and 38% experienced faecal incontinence. Conclusion: The meta-analysis highlights the significant risk of OASIS and anal incontinence following primary repair, emphasizing the need for improved clinical practice and further research.

Immediate sphincter repair

- Early post-partum period
 - 60-70% asymptomatic
 - High rate of persisting sphincter defects on USS (breakdown or poor repair)
- Long term
 - Up to 60% of women will have significant FI after 10 years
 - Severity of symptoms is related to grade of initial injury

Revised: 1. General Obstetric Care, 2017 (last updated 2021). doi: 10.1093/obg/obz019

Definition, epidemiology and risk factors of obstetric anal sphincter injuries: CNGOF Perineal Prevention and Protection in Obstetrics Guidelines

Long-term and continence and quality of life following perineal and sphincter injury

Early results of immediate repair of obstetric third-degree tears: 65% are completely asymptomatic despite persistent sphincter defects in 61%

Early results of immediate repair of obstetric third-degree tears: 65% are completely asymptomatic despite persistent sphincter defects in 61%

Guidelines for future deliveries

Future deliveries

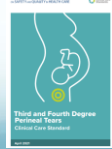
What advice should women be given following an obstetric anal sphincter injury concerning future pregnancies and mode of delivery?

All women who sustained OASIS in a previous pregnancy should be counselled about the mode of delivery and this should be clearly documented in the notes.

The role of prophylactic episiotomy in subsequent pregnancies is not known and therefore an episiotomy should only be performed if clinically indicated.

All women who have sustained OASIS in a previous pregnancy and who are asymptomatic or have abnormal endosomal ultrasonography and/or manometry should be counselled regarding the option of elective caesarean birth.

Advise women that a third or fourth degree tear does not exclude a subsequent vaginal birth.^{1, 20} Advise them to discuss future birth planning with a maternity healthcare provider who has experience in caring for women with previous third or fourth degree tears, who can provide counselling about future pregnancies and discuss the woman's preferences.



Prevention by Caesarean?

- Faecal incontinence
- OP presentation
- Weight predicted >4kg
- Mother aged >35
- BMI >30
- Short perineum

PMOJ 2014;16(1):20223-20232

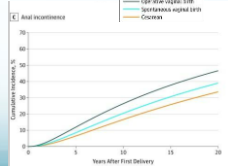
Association of Delivery Mode With Pelvic Floor Disorders After Childbirth

JAMA. 2014;311(10):1085-1092. doi:10.1001/jama.2014.1085

PMOJ 2014;16(1):20223-20232

Pregnancy- and obstetric-related risk factors for urinary incontinence, fecal incontinence, or pelvic organ prolapse late in life: A systematic review and meta-analysis

Neurology. 2014;83(10):1085-1092. doi:10.1213/NEO.0b013e3182a1085



Rectal capacity problem/ hypersensitivity

- Diarrhoeal states
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Non-surgical treatments

- Multi-disciplinary approach
- Physiotherapy
- Dietician
- Stool modification
- Enemas
- Trans-anal irrigation
- Plugs
- Posterior tibial nerve stimulation



Surgery for FI

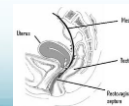
- Anterior levatorplasty
- Postanal repair
- Total pelvic floor repair (Anterior levatorplasty + post anal repair)
- Internal sphincter plication
- Thiersch wire
- Secca procedure
- Neosphincter formation
 - Graciloplasty
 - Artificial – hydraulic silastic balloon cuff/ Perix



Surgery for FI

- Prolapse surgery
- Antegrade colonic enema procedure
- Sphincter repair
- Bulking agents/ Sphinkeeper
- Sacral neuromodulation
- Stoma

Ventral rectopexy – laparoscopic/ robotic



Ventral rectopexy

- Should be considered in people with severe faecal incontinence and high grade internal rectal prolapse refractory to conservative treatment

- Low morbidity
- Low risk of recurrence
- Improvement in bowel function
- Improvement in quality of life

Emile et al. Colorectal Disease, 2017

Ventral rectopexy

Abdominal rectopexy for the treatment of internal rectal prolapse: a systematic review and meta-analysis

S. M. Emile*, M. A. El-Sherpieny, M. Tawfik*, M. Farid* and S. D. Wazir*

Colorectal Disease 2017; Volume 19, Issue 1



Item	Ventral rectopexy
No. of studies	10
No. of patients	116
Male/female	115/100%
Median age (range)	61 (43-76)
Median duration of symptoms (months)	142
Preoperative bowel function	12/100%
Median operative time (min)	93.5
Median length of hospital stay (days)	2
Weighted mean rate of improvement of incontinence (95% CI)	76% (66%-86%)
Weighted mean rate of improvement of prolapse (95% CI)	62.5 (48.5-80.6%)
Rate of reoperation or reoperation surgery	0 (0%)
Rate of reoperation or reoperation surgery	0 (0%)
Median rate of incontinence rate (95% CI)	0.5 (0.1-0.9)
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- 62.5% improvement in faecal incontinence

Antegrade colonic enema procedure

- Consider in patients with severe slow transit constipation/ neurological disorders/ faecal incontinence
- Must be thin/ motivated/ intact appendix if appendicostomy

- Acceptable treatment for FI/ chronic constipation
- Variable outcomes
- Takes time to perform

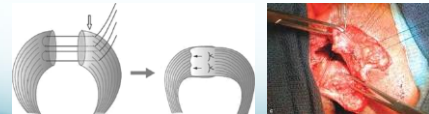
Use of Antegrade Continence Enema for the Treatment of Faecal Incontinence and Functional Constipation in Adults: A Systematic Review

Authors: C. P. P. (University of Toronto, Toronto, Canada), M. A. (University of Toronto, Toronto, Canada)



Sphincter defects

- Post partum obstetric sphincter injuries – consider repair
- Internal sphincter/ levators – controversial



Lambert et al. Int J Col Disease, 2014

Outcomes – long term

Diseases of the Colon & Rectum Volume 35: 4 (2012)



Long-Term Outcomes of Anal Sphincter Repair for Fecal Incontinence: A Systematic Review

by Glasgow, Steele, C., Lavery, A.M.G.

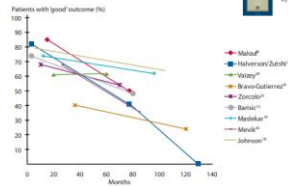


FIGURE 2. Results from published series examining anal sphincter repair outcomes over time. "Good" outcome determined using definitions provided by the authors of each article.

Bulking agents

- PTQ – injectable silicone biomaterial – variable short term data.
- Solesta – stabilised hyaluronic acid – some initial short term benefit
- Durasphere beads – not as good as PTQ
- NASHA – dextranomer in stabilised hyaluronic acid – some short term data
- Fenix – taken off the market – "business not safety decision"
- SphinkKeeper



Watson et al. Colorectal Disease 2012

Sacral neuromodulation

- 2 stage procedure – in theatre under sedation
- Great results -80-90%+ improvement in faecal incontinence
- Similar improvement even in the presence of sphincter injuries
- In women with obstetric injuries – also improves urinary incontinence, urgency and sexual dysfunction



Brouwer et al. DCR 2010
Hydningen et al Colorectal Disease 2018

Sacral neuromodulation

- Significant improvement in FI
- Decrease number of episodes of FI per week
- Improvement in QOL
- Maintains therapeutic effect in the long term

Systematic review of the clinical effectiveness of neuromodulation in the treatment of faecal incontinence

Sacral nerve stimulation versus percutaneous tibial nerve stimulation for faecal incontinence: a systematic review and meta-analysis

Sacral neuromodulation

- Sphincter defects
- Radiation
- Crohn's disease
- Partial spinal cord lesions
- Cauda equina
- Several neurological diseases eg muscular dystrophy and systemic sclerosis
- Congenital ano-rectal malformations



Sacral neuromodulation

- Worse outcomes in the presence of untreated high grade internal rectal prolapse
- If performed after ventral rectopexy for persistent incontinence– good outcomes



Prapasivovskul et al Int J Colorectal Dis 2015
Mishra et al Colorectal Dis 2016

Summary

- Reassure patient that faecal incontinence is common
- MANY treatments available
- Modify stool consistency – fibre supplementation – psyllium husk. Consider low dose loperamide
- Pelvic floor physiotherapist (with knowledge of anorectal problems/ treatment)

Summary

- Multifactorial
- Sphincter defects
 - External anal sphincter repair in young, post partum ladies
 - SNM works well even with sphincter defect
 - Internal sphincter defects are more difficult to manage
- Prolapse
 - External rectal prolapse – ventral rectopexy
 - Internal rectal prolapse – maximum conservative management prior to consideration of surgery –ventral rectopexy
- Repair of "anatomical abnormality" does not necessarily improve symptoms

Referrals

I'm available for questions/ advice

Options – depending on patient and GP preference

- 1) Work patient up with bloods/ stool tests/ stool modification and send to me if no improvement
- 2) Send to our nurse practitioner - 45 min bulk billed appointment – can perform initial investigations and treatment as required. She will refer on to me/physio if patient wishes/ doesn't improve
- 3) Reassure patient there is lots that can be done and refer to me directly



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QLD PELVIC FLOOR CENTRE

ABOUT WHAT WE DO FOR MEDICAL PRACTITIONERS CONTACT MAKE AN APPOINTMENT

Redefining 'patient-centred' care

Problems with the vagina, uterine, or rectal prolapse, or incontinence of the bowel and bladder are some of the most embarrassing and distressing conditions experienced by Australians. All around the country, incontinence is the silent epidemic of the 21st century and it has caused a significant impact on the quality of life.

Questions?

