Pelvic floor dysfunction and treatment

Keith Chapple and Sarah Kelly
Sheffield Teaching Hospitals
Pelvic floor dysfunction

- What is the pelvic floor?
- What do we mean by pelvic floor dysfunction?
What is the pelvic floor?
What is the pelvic floor?
What is the pelvic floor?
Pelvic floor dysfunction

- Basically refers to any abnormality of the pelvic floor
- But normally taken as weakness of the pelvic floor
Who gets it?

- Are you sitting comfortably?
Who gets it?

- Are you sitting comfortably?

- Anywhere between 25-50% women at some point in their lifetime
  - 10% women aged 20-39
  - 27% women aged 40-59
  - 37% women aged 60-79
  - 50% women aged 80+

- 10% of women will require surgery
Main risk factors

- Female
  - Larger pelvis
  - Childbirth
- Overweight
- Ageing
- Genes
- Pelvic surgery
- Irradation
Effects of dysfunction

- Manifests as a wide range of symptoms
  - Difficulties with urination
    - Urinary incontinence
  - Difficulties with defecation
    - Faecal incontinence
    - Constipation
  - Pelvic organ prolapse
  - Sexual dysfunction
  - Pain
What do I do?

- History
- Examination
- Basic investigations
- Basic treatment
Assessment

- History is vitally important
  - Type
  - Severity
  - Effect on quality of life

- Often more than 1 problem

- Information often asked for rather than volunteered
Faecal incontinence

- Of what type?
  - Gas/liquid/solid
- How often?
- What type?
  - Passive
  - Urge
- Use of pads
- Use of constipating medication (Immodium)
Evacuatory difficulties

- How frequent?
- Urge to go to toilet?
- How long sitting?
- Consistency of stool
- Use of digitation
  - Perineal pressure
  - Vaginal/anal digitation
Urinary incontinence

- Type
  - Stress
  - Urge
- Nocturia
- Dysuria
- Use of pads
Prolapse symptoms

- Sense of bulge
- Where bulge felt
- Need to digitate
  - Perineal
  - Vaginal
  - Anal
- Pain
- Dyspareunia
Quality of life

- Single most important aspect of history-taking
- Effect on quality of life often not related to severity of symptoms
Assessment

- Examination
  - Abdominal
  - Perineal
    - Rectal
    - Vaginal
Further investigations

- Depends on type of problem
- Blood tests
  - Bowel problems
    - Endoscopy
    - Defecating proctogram
    - Anorectal manometry
    - Endoanal ultrasound
  - Urine problems
    - MSU
    - Frequency charts
Treatment

- Generally, we start with the simple things
  - Laxatives/constipating agents
  - Exercise
  - Diet/fluid
  - Lifestyle measures
  - Biofeedback

- Exception is prolapse where we have a lower threshold to operate
Treatment

- Simple lifestyle modifications can be initiated at the first outpatient visit
- I send almost all patients to GI physiologists
Reasons to go to GI physiology

- They are better than me at many things
  - Give more time
  - Repeated visits
  - Obtain history aspects I am not very good at
    - Sexual abuse/bullying

- They can do further investigations
  - Anorectal manometry
  - Endoanal ultrasound
Reasons to go to GI physiology

- They can give very effective treatment
  - Biofeedback

- Most patients I send to GI physiology I never see again
Typical pathway

- Consultant referral
- Pt attends for anorectal physiology investigations
  - Anorectal manometry
  - Endoanal ultrasound
  - +/- colonic transit studies
- Attends for initial Biofeedback session
- Further BF f/u as required
- Neuromodulation if appropriate/required
Anorectal physiology tests

- 1 hour appointment
- Pre test Sx questionnaire
- PR exam
- Anorectal manometry
  - Assesses sphincter pressure, awareness, rectal capacity, bear down technique
  - +/- balloon expulsion
- Endoanal ultrasound
  - Assess sphincter integrity, atrophy/hypertrophy, fistula/abscess etc
Anorectal manometry

- 16 axial x 16 circumferential = 256 total sensors
- Central balloon inflation lumen
- 10 mm dia
Anorectal manometry
Resting pressure and squeeze manoeuvre
Bear down manoeuvre

..... How not to do it!
Bear down ..... How it should look!
Endoanal ultrasound
US imaging of the anal canal can be divided into 3 levels of assessment upper/high, middle and lower levels.

High/upper level – sling of puborectalis, deep part of EAS and complete IAS

Mid level – superficial EAS (complete), IAS and TP’s

Low level – subcutaneous EAS
Typical US snapshots
US abnormalities
Colonic transit studies
Biofeedback – bowel retraining

Describes a *non-standardized* package of care;

to not only “retrain” the pelvic floor but to help educate the patient to allow them to gain more control of their distressing symptoms.
Continence is a complex process – it depends not only on the strength and integrity of the anal sphincters, but also the relationship between stool consistency, local bowel and rectal function, sensory awareness and psychological state.
• Modification of dietary fibre, caffeine and fluid intake
• Lifestyle changes – exercise and weight loss
• Titration of loperamide
• Glycerine Suppositories
• Pelvic Floor exercises
• Relaxation techniques and toilet positioning
• Bowels respond best to regular habit, ideally 30 mins after a meal, due to the gastro-colic reflex.

• Encourage patients to find a toilet that they feel comfortable to use and where they do not feel inhibited by lack of privacy or time.

• Teach them how to relax and position themselves on the toilet

• Discourage patients from having a fixation of having to go the toilet a certain number of times.

• Discourage patients from deferring – studies have shown that deferring over time slows colonic transit in normal group.

• Re-education of the bowel to open at convenient times.
Neuromodulation

“a physiological process in which the influence of activity in one neural pathway modulates the pre-existing activity in another through synaptic interaction”

Fall & Lindstrom, 1991

Two forms of neuromodulation now used for treating bowel dysfunction are Sacral Nerve Stimulation (SNS) and more recently Percutaneous Tibial Nerve Stimulation (PTNS)
PTNS

- May 2011 – NICE guidance issued for PTNS in the management of FI
- Delivers stimulation to the sacral nerve plexus by temporarily applying electrical pulses to the posterior tibial nerve
- The anatomy of the ankle area provides an easy access point to the posterior tibial nerve
The tibial nerve contains sensory and motor fibres & originates from the ventral branches of the rami of 4th & 5th lumbar and 1st, 2nd & 3rd sacral nerves.

Same spinal segments innervating bladder, rectum and pelvic floor.
Protocol

• Assess patient via ePAQ, wexner scores and visit record
• 12 x 30 minute stimulation sessions, typically once weekly
• Top up sessions may be required
• Insert needle and connect to stimulator
• Gradually ↑ stimulation until appropriate response observed
• -Typically toe fan/flex/twitch,
• or sensation felt towards the heel,
• arch, toes or up the leg.
• Tx automatically ends after 30 mins
Management

- If biofeedback doesn’t work
  - Reassess
  - Consider surgical options

- May need to perform further investigations
  - Colonic transit studies
  - Defecating proctogram
Rectal irrigation
Surgery
Sacral neuromodulation
SNS/SNM

- Patients – FI, constipation – no longer funded
- Pre SNS counselling
- 2 week trial
- MDT
- Permanent implant
- Long term follow up
- SNS/SNM therapy is delivered from the InterStim neurostimulator to the nerve through the electrodes on the tined lead.

- Lead placement is **CRITICAL** for optimizing therapeutic effect.

- An ideally placed lead will “follow” along the nerve.
Programming – electrode configuration

- Stimulation is delivered at the negative (-) electrode

- (-) electrode = **Active Electrode**

- (+) electrode = **Ground Electrode**

- Changing the Active electrode changes the stimulation pattern

- Patients attend for routine f/u to assess symptomatic improvement, lead health and monitor battery life

- There are many reprogramming options available to try, to optimize tx success
Surgery
Treatment - surgical
Treatment - surgical
Treatment - surgical
Stoma
Conclusions

- Pelvic floor dysfunction is exceptionally common

- A multi-disciplinary approach to management of the patients is critical

- Treatment is normally non-surgical

- Wide variety of surgical options available if necessary