Defecating Proctogram: Pooping the poo and holding the fart study
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Learning objectives
- Be able to describe the appearances of a normal rectocele in women.
- Be able to describe the normal change in anatomy and the physiological process of defecation.
- Be able to recognize the common abnormalities seen on a defecating proctogram, in particular enterocoele, rectocele, rectal mucosal prolapse and paradoxical rectopectal descent.
- Develop an understanding of what important positive and negative findings should be reported back to the referring clinician.

Common indications
- Constipation/obstructed defecation
- Fecal incontinence
- Suspected pelvic floor weakness

Contraindications
- Pregnancy

Equipment

Set up of screening room

Preparation
Need for oral contrast:
Males - not required.
Females - required to opacify small bowel, to demonstrate any enterocoeles which are common in females. 10ml Gastrogafin and 100ml EzHD can be mixed in 200ml water and given to the patient to drink 1hr before the examination.

Preparing the rectal contrast:
45ml warm water is mixed with a pot of EzHD (35ml water per sachet) to give a tooth paste consistency. Contrast is administered prior to transferring the patient to the proctogram chair.

Instructions to the patient
“Squeeze as though you are trying to hold a fart at a wedding”
“Now just poop it out”

Proctography requires images to be obtained at rest and while the patient is squeezing and defecating. This can be very embarrassing for patients. Using simple everyday language can help the patient feel more ease.

Normal defecating mechanism
At rest the anal canal is closed with an anal rectal angle >100° made by puborectalis. The pelvic floor is above the ischiococcygeal tuberosity.

During pelvic contraction, the rectum is elevated and the anal canal lengthens.

During Expulsion, there is pelvic floor descent and widening of the anal rectal angle.

Rectal Prolapse
Rectal prolapse may be internal (also known as intussusception) or external, where the bowel descends outside of the anus.

Risk factors:
- Age,
- Childbirth,
- Constipation and straining.
- Can be associated with prolapse of other pelvic organs
- Patients may have a predisposition because of collagen abnormalities.

Symptoms:
- Obstructed defecation syndrome (discomfort, pain, constipation, difficult evacuation)
- Fecal incontinence with discharge of blood/mucus
- Rectocele (vaginal bulge) in women
- Painful intercourse
- Lower back pain
- Urinary dysfunction
- Vaginal prolapse
- Enterocele

Rectal intussusception and unexplained faecal incontinence: findings of a rectoanal intussusception (low rectal) or enterocoele [3].

Example cases
Mild rectal descent on squeezing and an anterior rectocele with a small amount of barium trapping. There is an Oxford grade 1 (arrow) rectoanal intussusception.

Mild-to-moderate rectal descent. There is an anterior rectocele with a small amount of barium trapping (arrow). There is an Oxford grade 1 rectoanal intussusception (*).

A low rectoanal intussusception to the level of the anal verge (arrow).

Significant small bowel enterocoele present (arrows).

References:
- 1. PALIT et al. 2012. The physiology of defecation.