Non-urological complications of urological cancer treatment

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Gastro-intestinal complications after urological cancer treatment

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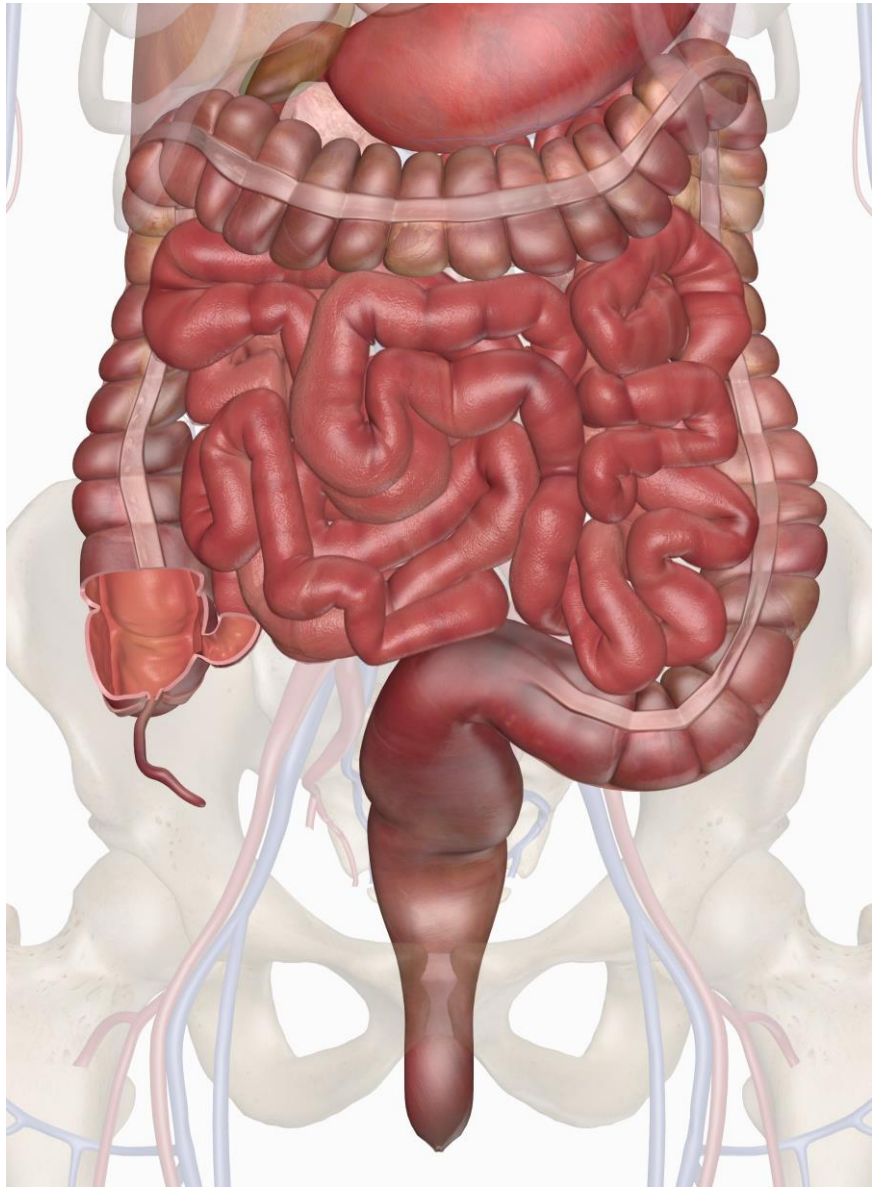
Pelvic Radiotherapy

- Majority of GI complications related to pelvic RT
- GI-tract radiosensitive and limiting factor
- The cecum, the sigmoid and the rectum fixed position
- Distal ileum mobile



Pelvic Radiation Disease (PRD)

Consequences of pelvic RT: Pelvic Radiation Disease

Definition:

- Pelvic Radiation Disease is a collection of symptoms that can arise after RT treatment to the abdomen or pelvis for cancers such as cervical, prostate, bladder and bowel cancers.

Pelvic Radiation Disease (PRD)

GI symptoms impact on Quality of Life

- 80% permanent change in bowel function
- 20-40% moderate or severe impact on QoL

Muls AC, *et al*. *Frontline Gastroenterology* 2013;**4**:57–68.

Pelvic Radiation Disease (PRD)

Most frequent symptoms

- Urgency (80-85%)
- Flatulence (67-77%)
- Diarrhoea (75%)
- Abdominal pain (65%)
- Incontinence (45-57%)
- Rectal bleeding (42%)

Frontline Gastroenterology 2013;4:57–68.

Pelvic Radiation Disease (PRD)

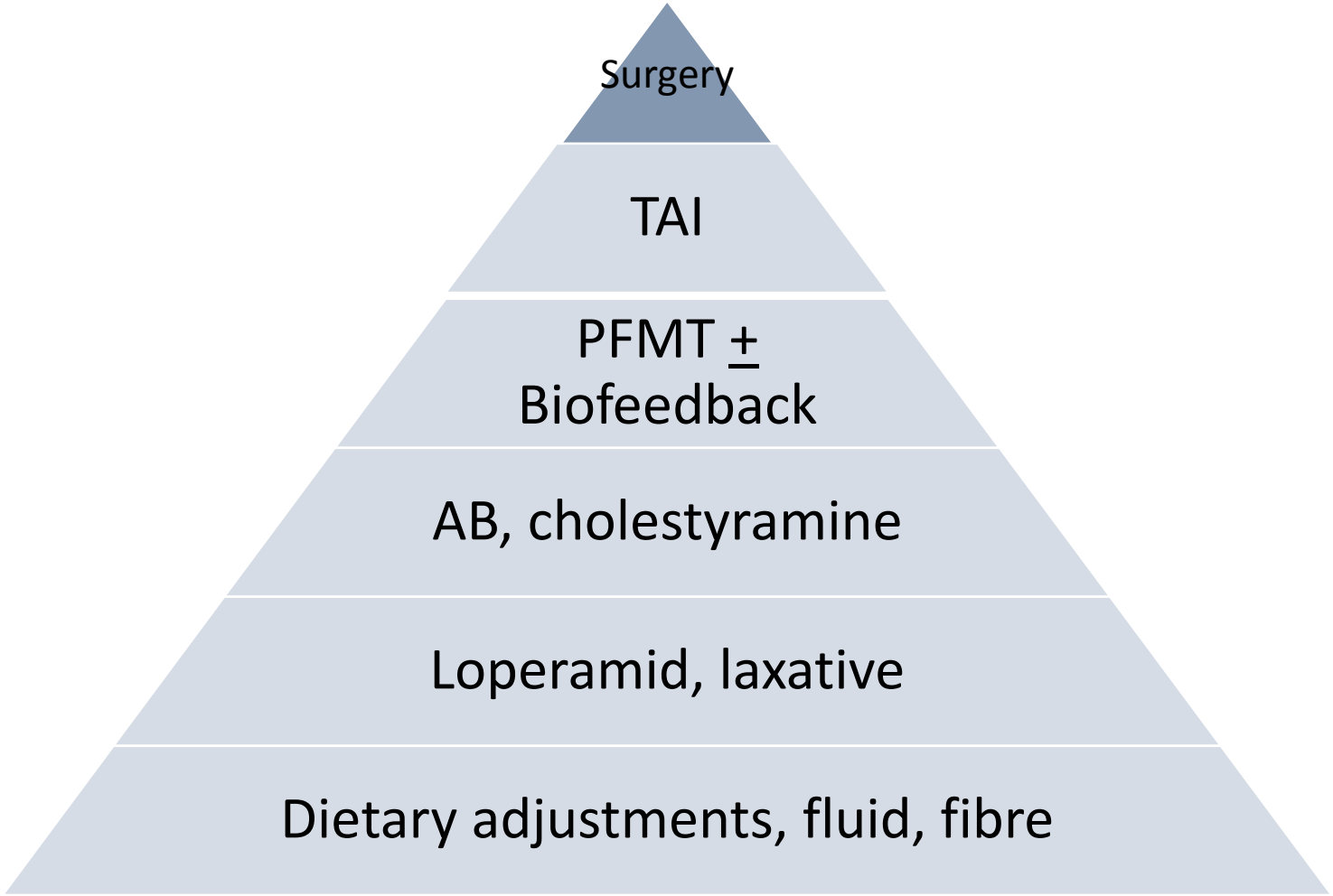
Follow up after cancer treatment

- Main focus on cure from cancer
- Few referred to pelvic floor units
- Good options for symptom relief with simple tools

Pelvic Radiation Disease (PRD)

Treatment strategy of PRD

- Mainly conservative



Pelvic Radiation Disease (PRD)

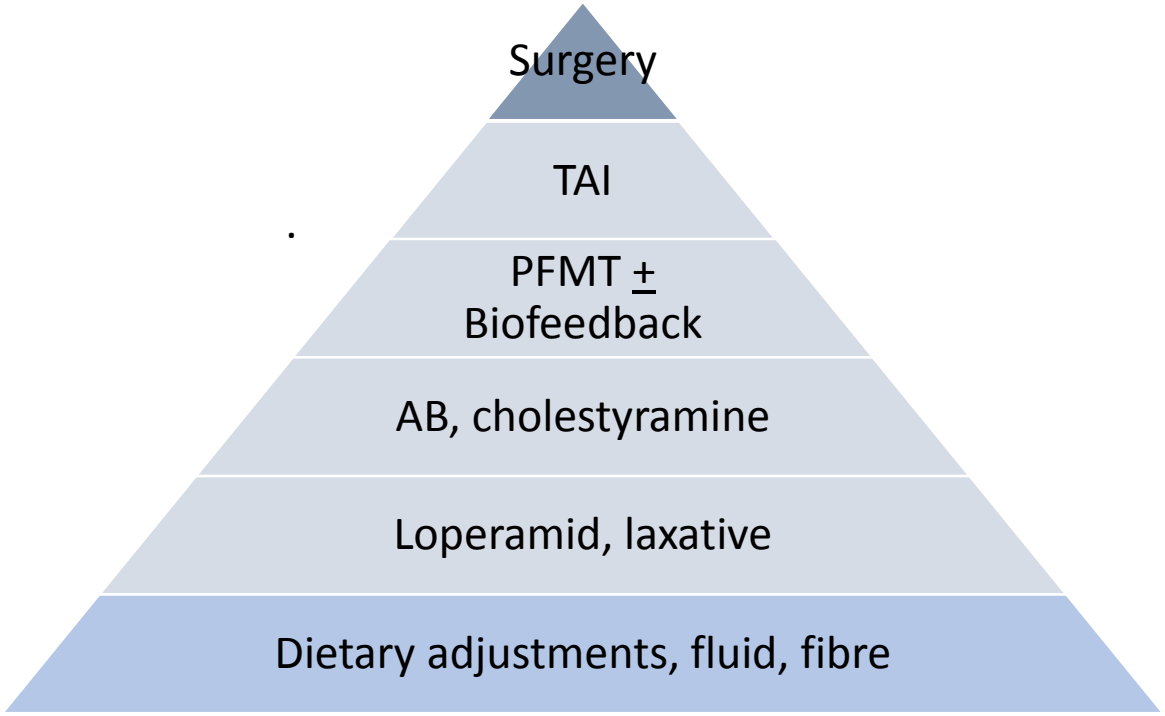
Treatment strategy of PRD

- Mainly conservative
- Best managed by specialist nurses

Pelvic Radiation Disease (PRD)

Fibre supplementation

- Dietary fibre can improve stool consistency and a produce a 50% reduction in episodes of FI in patients with loose stool.



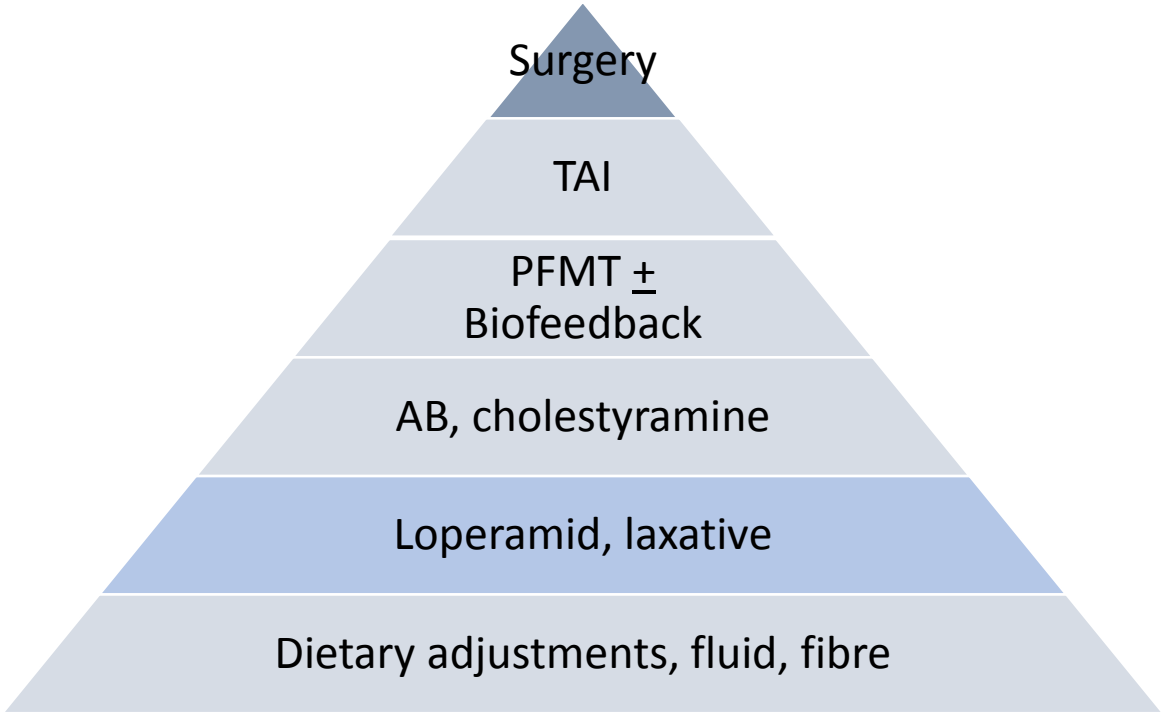
Bliss et al. Nurse Res. 2001;50:203-13 (RTC)

Pelvic Radiation Disease (PRD)

Loperamide

- Loperamide is useful for diarrhoea-associated FI; reduce frequency of FI episodes and firms the stool

- Increases transit time
- Reduces intestinal motility
- Increases resting anal sphincter tone



Cochrane 2003;4:1-26, DCR 2007;50:641-9

Pelvic Radiation Disease (PRD)

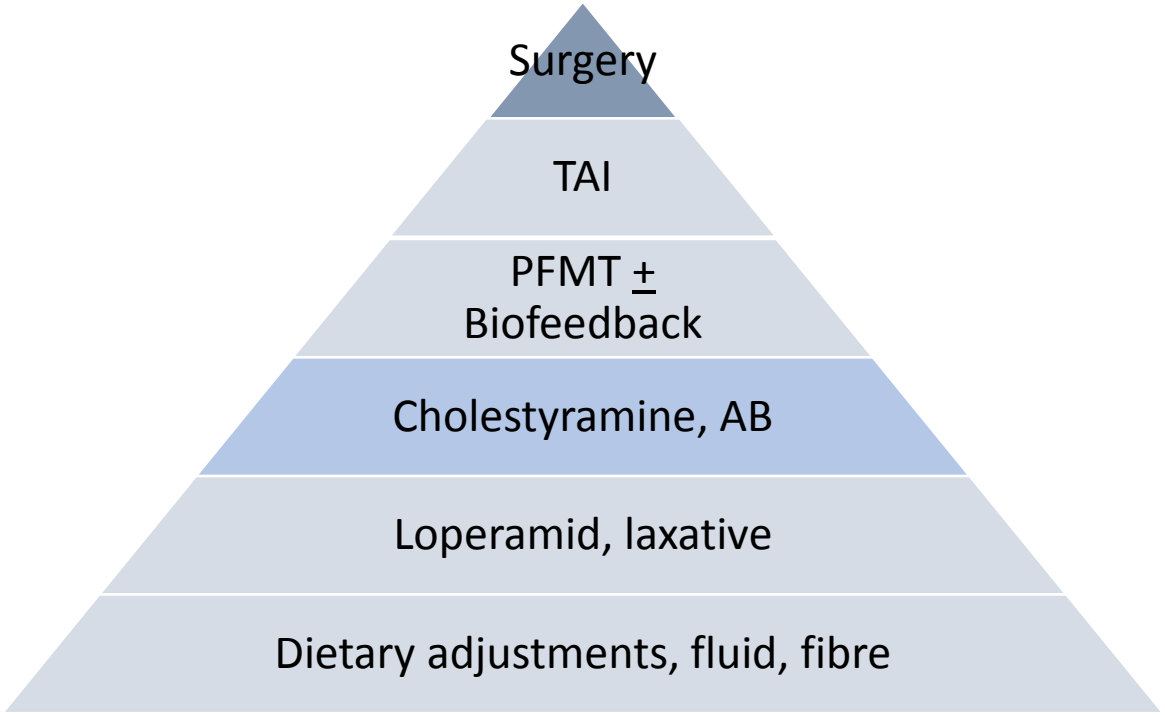
Symptoms from small bowel injury

- Bile acid malabsorption
- Bacterial overgrowth

TABLE 3
Frequency of Reported Physiological Changes after Radiotherapy

	Acute toxicity during radiotherapy	Chronic toxicity
Lactose intolerance	50%	5–7%
Malabsorption of other disaccharides	?	?
Bile acid malabsorption	50%	1–73%
Small bowel bacterial overgrowth	25%	8–45%
Rapid transit	100%	?
Viral infection	?	?
C. difficile infection	?	?
Side effects of non-chemotherapy medication	10%	5%
Pancreatic insufficiency	?	2%
Primary inflammatory bowel disease	?	4–5%

RADIATION RESEARCH **185**, 341–348 (2016)

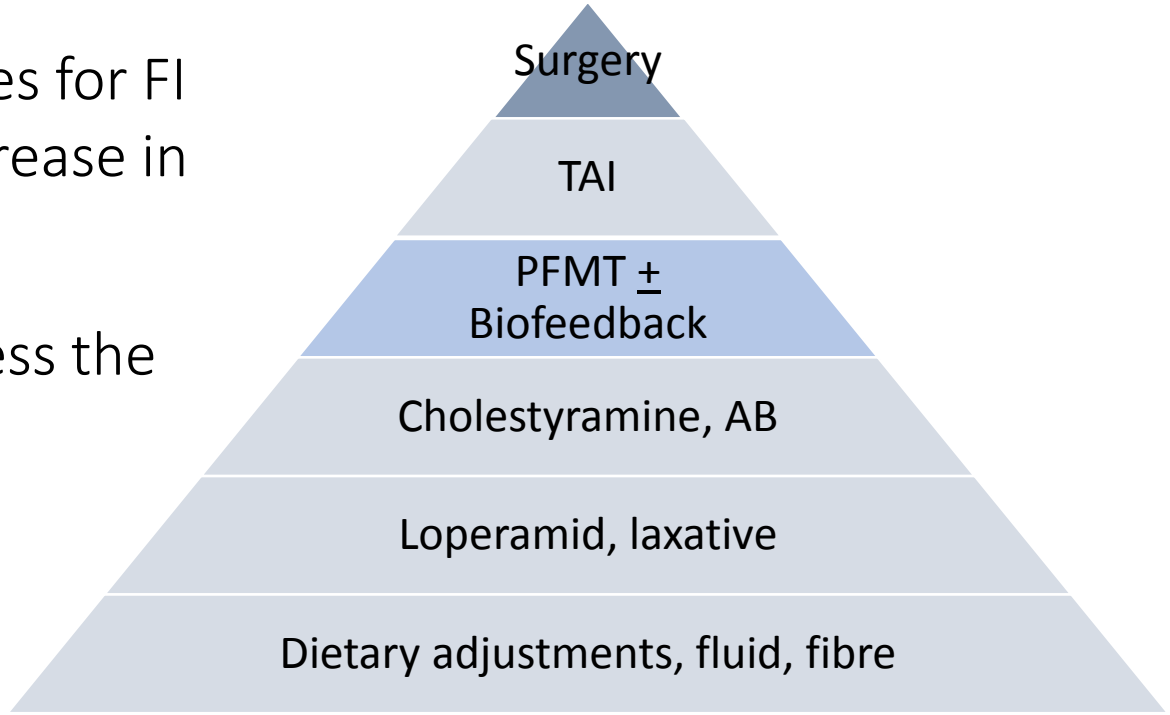


Pelvic Radiation Disease (PRD)

Biofeedback

Improve control of the external anal sphincter

- Most uncontrolled biofeedback studies for FI have been favourable, up to 70% decrease in FI episodes.
- Cochrane review: no evidence to assess the efficacy in the long term

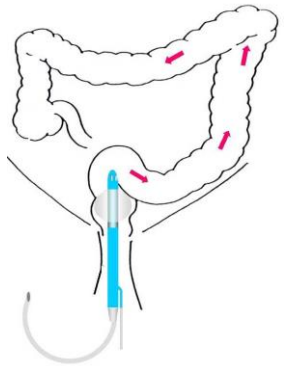


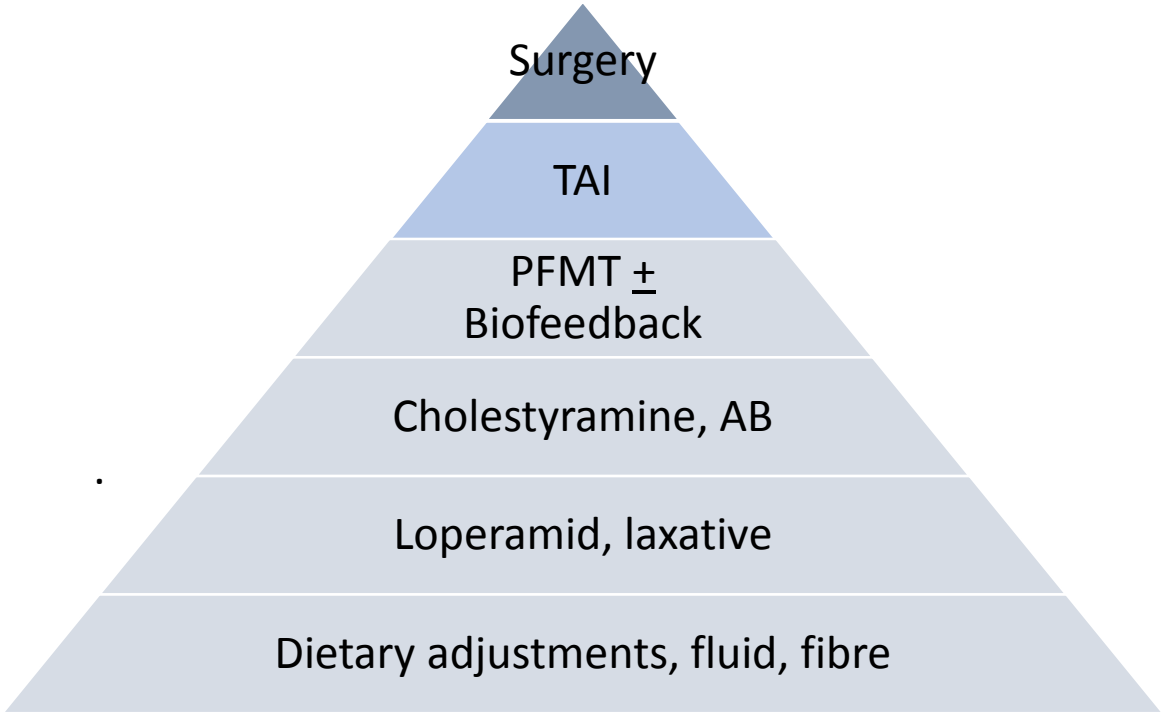
Cochrane 2013

Pelvic Radiation Disease (PRD)

Transanal irrigation (TAI)

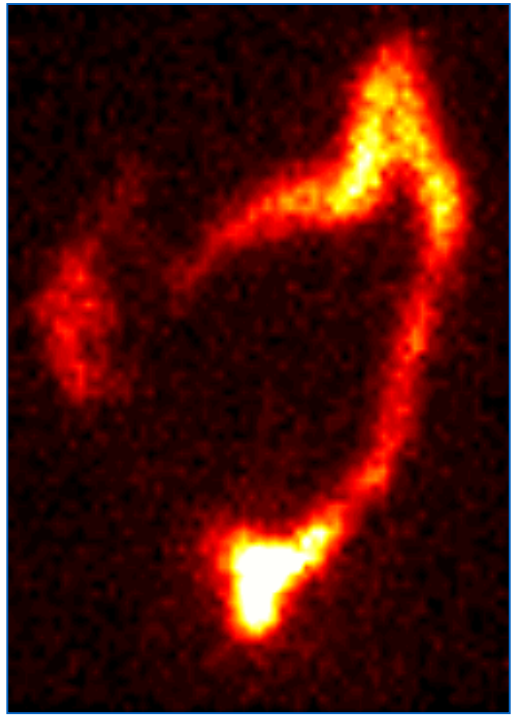
- A wash-out of colon and rectum
- Stimulation of motility
- Mass movement



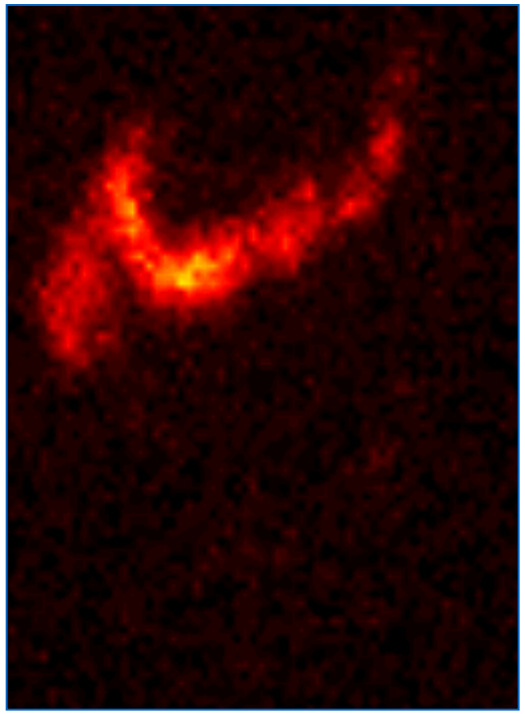


Pelvic Radiation Disease (PRD)

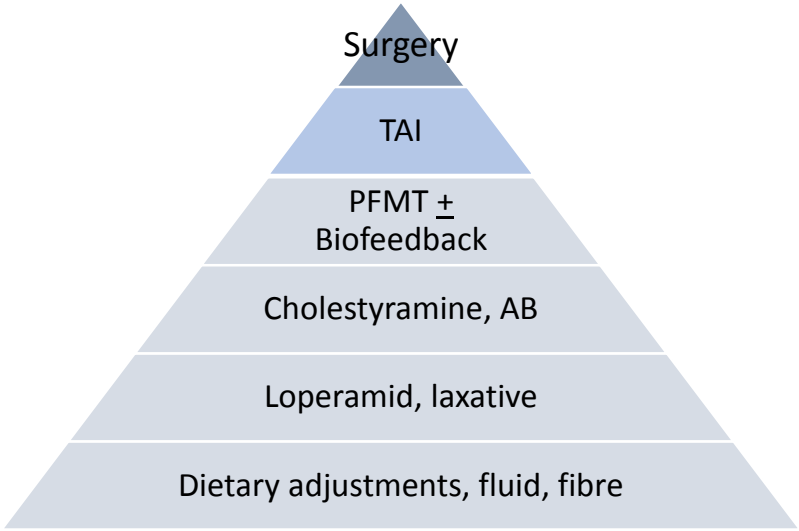
Transanal irrigation (TAI)



Before irrigation



After irrigation



Pelvic Radiation Disease (PRD)

Transanal irrigation (TAI)

ORIGINAL CONTRIBUTION

Long-Term Outcome and Safety of Transanal Irrigation for Constipation and Fecal Incontinence

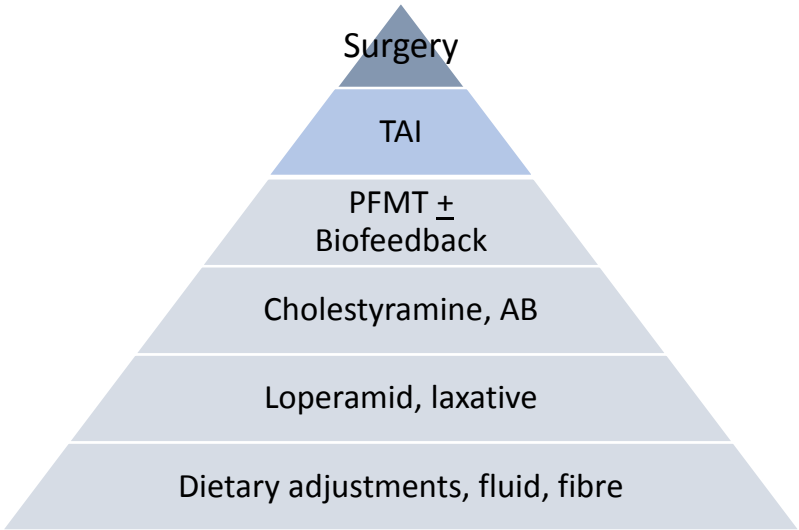
Peter Christensen, Ph.D.[1,2] • Klaus Krogh, D.M.Sci.[2] • Steen Buntzen, D.M.Sci.[1]
Fariborz Payandeh, M.D.[2] • Søren Laurberg, D.M.Sci.[1]

- 10 year period
- N=348
- Background pathology differs
  - Neurogenic 107
  - Anal insuff. 70
  - Seq. surgery 48
  - Constipated 79
  - Misc 44

- Overall effective 47%

TABLE 1. Overall outcomes of transanal irrigation

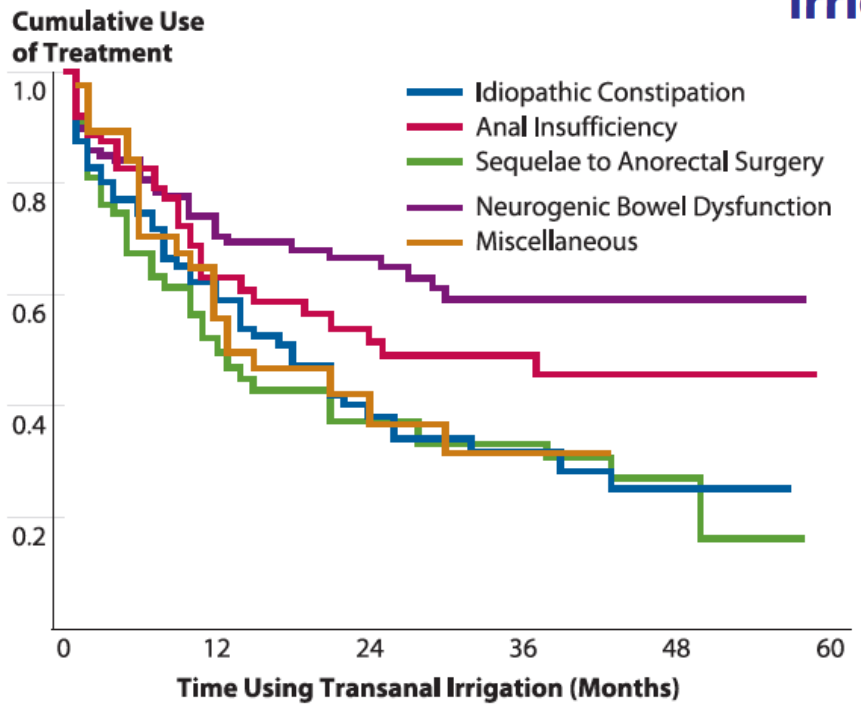
Background pathology	*n*	*Success*	*Failure*	*Success (%)*
Spinal cord injury	68	42	26	62
Spina bifida	18	12	6	67
Multiple sclerosis	10	5	5	50
Cerebral thrombosis	10	7	3	70
Parkinson's disease	1	1	0	100
Idiopatic fecal incontinence	49	25	24	51
Obstetric sphincter injury	21	11	10	52
Sequelae from rectal surgery	15	6	9	40
Sequelae from rectal prolapse	21	5	16	24
Sequelae from anal surgery	12	3	9	25
Idiopathic constipation	79	27	52	34
Slow transit constipation	43	14	29	
Obstructed defecation	30	13	27	
Undetermined	6	0	6	
Miscellaneous	44	19	25	43
Total	348	163	185	47



Dis Colon Rectum 2009; 52: 286–292

Pelvic Radiation Disease (PRD)

Transanal irrigation (TAI)



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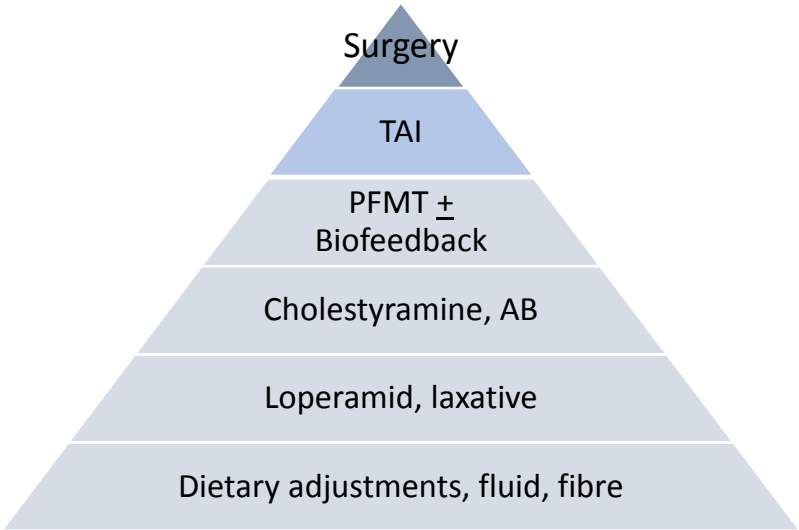

Pelvic Radiation Disease (PRD)

Surgical treatments for PRD

- Few patients with PRD needs surgery

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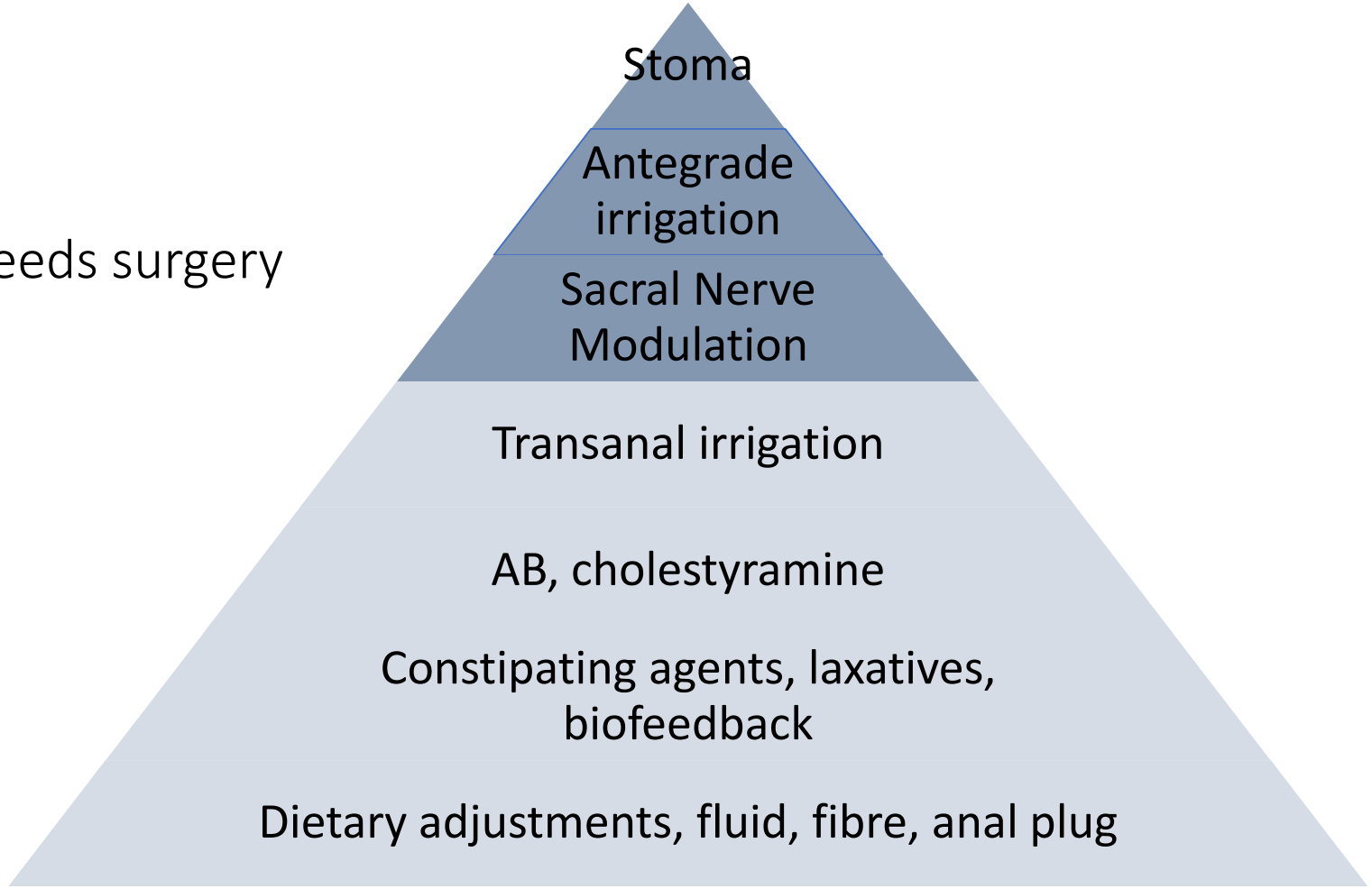
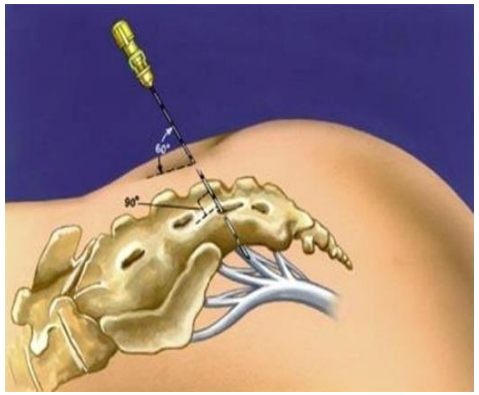


Pelvic Radiation Disease (PRD)

Sacral nerve stimulation

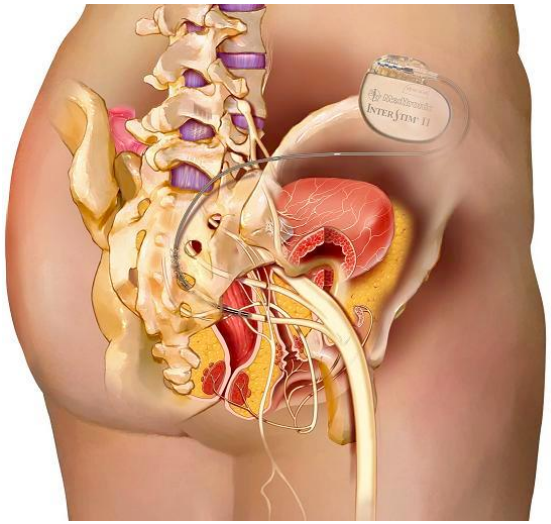
- Minimally invasive technique .
- Placement of an electrode
- Parallel to sacral nerve root S3 or S4



Pelvic Radiation Disease (PRD)

Sacral nerve stimulation

- Three week test period
- Implantation of neurostimulator
- Success rate > 80%



Pelvic Radiation Disease (PRD)

Appendicostomy

- Antegrade irrigation
- Slow transit constipation
- Faecal incontinence

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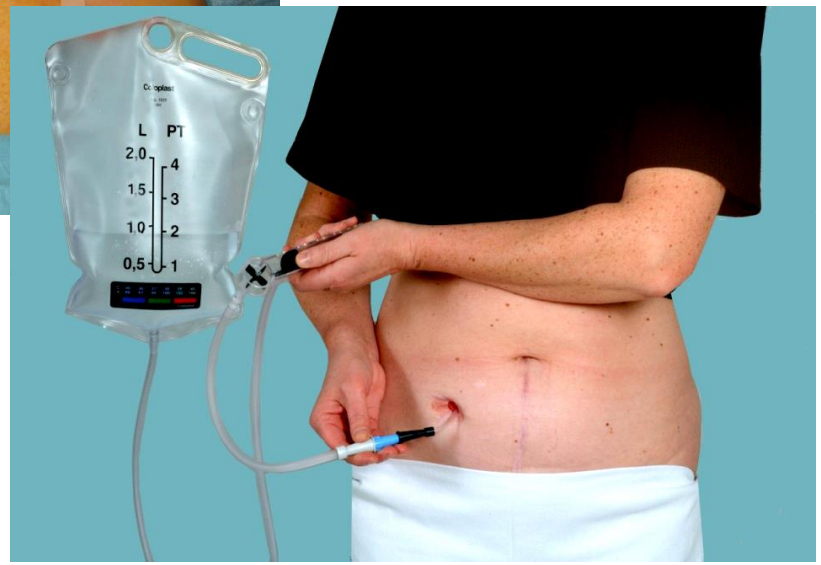


Pelvic Radiation Disease (PRD)

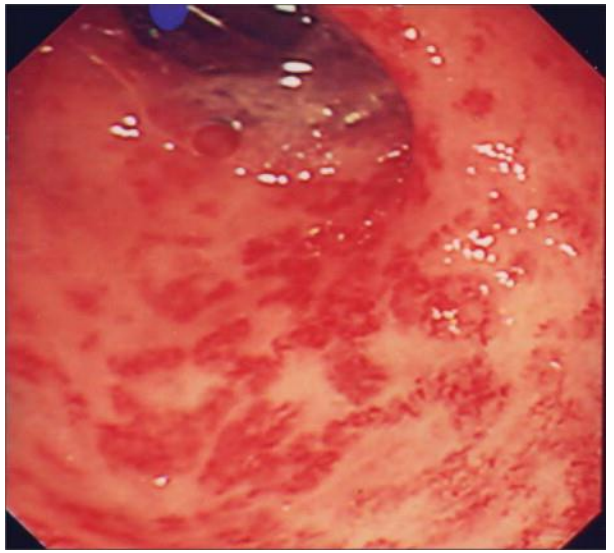
Stoma

- Obtain control

Pelvic Radiation Disease (PRD)

Rectal bleeding

- Radiation proctitis
- Telangiectasia
- Bleeding in 50% of patients
- Less than 6% needs intervention
- Few transfusion dependent



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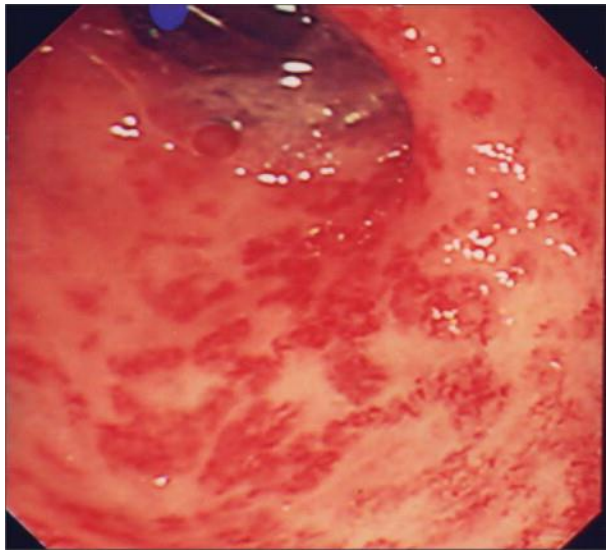
Pelvic Radiation Disease (PRD)

Treatment

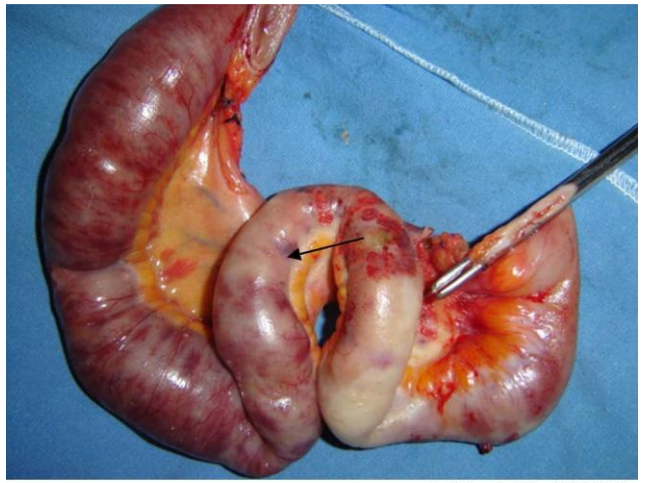
- Enemas (sucralfate, steroids)
- Topic application of formalin
- Argon beaming



Pelvic Radiation Disease (PRD)

Stenosis, strictures and fistulas

- Surgical challenge
- Resection or by-pass
- Surgery tailored to each individual patient



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Case 1 - Pelvic Radiation Disease (PRD)

72 year M, C. prostatae. Gleason score 8, T3N0M0. Hormone treatment followed by curatively intended RT. 78/55 Gy in 39 fractions. RT completed October 2015.

- Referred 2018 to Pelvic Floor Unit
- Bowel frequency 4x /day, urgency
- Bristol scale 3
- Evacuation difficulties
- Faecal incontinence 3x/months – physical activity, loose stool
- LARS score = 29 (moderate LARS)

Case 1 - Pelvic Radiation Disease (PRD)

Investigations

- Food history to assess dietary factors - 6- 8 cups of coffee/day
- Blood screen – within normal range
- Endoscopic assessment – few telangiectasia rectal - normal
- Anal / rectal examination – normal tone and good squeeze
- Se Chat scan – 7 day retention of 58% - normal
- Glucose/hydrogen methane breath test - negative

Case 1 - Pelvic Radiation Disease (PRD)

Treatment

- Reduce coffee intake
- Laxative – magnesium 2 tablets/day
- Small enema – irrigate the rectum after defecation
- Loperamide ½ - 1 tablet before physical activity

Case 1 - Pelvic Radiation Disease (PRD)

Follow-up 2 months

- Still evacuation difficulties
- Bowel frequency 2-3/day
- Bristol 3
- No FI during physical activity

- Transanal irrigation

Case 2 - Pelvic Radiation Disease (PRD)

Follow-up 6 months

- TAI every morning
- Bowel frequency 1-2/day
- Bristol 3
- No FI during physical activity
- LARS 19 (no urgency and faecal leakage)

Pelvic Radiation Disease (PRD)

Conclusion

- Pelvic Radiation Disease frequent – but often neglected
- GI symptoms have the highest impact on QoL
- Few patients are referred to specialised centres
- Conservative treatment effective
- Surgical options available

Thank you for listening

Pelvic Radiation Disease (PRD)

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