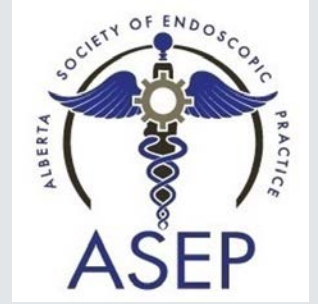


Endo Skills 2024

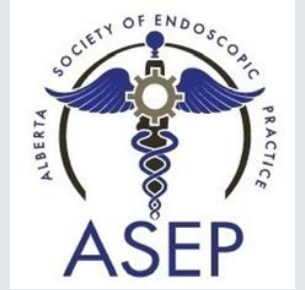
Disclosure of Commercial Support



- Endo Skills is presented by the Alberta Society for Endoscopic Practice (ASEP)
- ASEP: not for profit organization, whose goal is to provide education, resources and collaboration for endoscopists and their teams
- Endo Skills planning is independent from the exhibitors
- ASEP covers expenses of speakers and provides gift+ /- small honorarium to speakers and planning committee

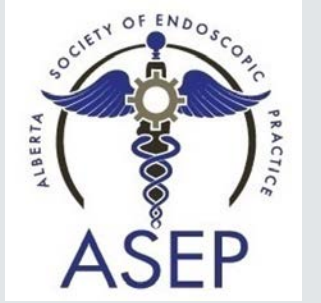
Endo Skills 2024

Managing Sources of Potential Conflict



- Endo Skills Planning Committee: oversees the program's content development to ensure accuracy and balance.
- Information and recommendations are evidence and/or guidelines-based, and opinions of the independent speakers will be identified as such.
- Program developed in accordance to ethical standards meeting Cert+ guidelines.

Endo Skills 2024: Presenter Disclosure



- Relationships that may introduce potential conflict of interest:
 - None

Perianal Disease: Talk Outline



- Why is research in this area important?
- Types of perianal disease
 - Fissures
 - Abscesses and fistulas
 - Hemorrhoids
 - Malignancy
- When do we need further imaging? Colonoscopy?
- What are the existing and emerging treatments?



Illustration by Smart-Servier Medical Art

Perianal Disease

This is a **common** complaint, with patients often not reporting symptoms. While less common, underlying **malignancy** can have similar presentations as benign disorders.

WHY SHOULD WE CARE?

- Tournu et al. 2017 prospective study GP
 - 15.6% anorectal symptoms, 2.3% declared as reason for consultation
 - 76% had diagnosis on PE
 - When referred, concordance between GP diagnosis and proctologist
- In Pakistan; observational study CRC clinic
 - 1.9% incidence of anal malignancy
 - 41% delay in diagnosis

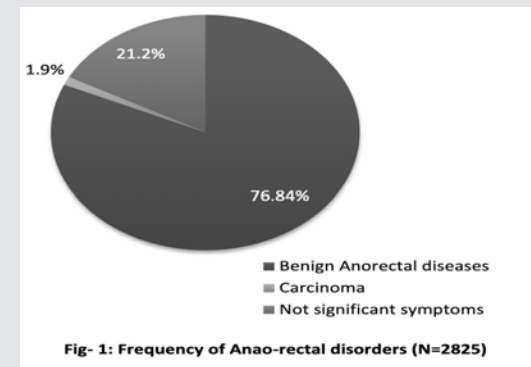
Table 1 Prevalence of anal symptoms and diagnosis approach

Anal symptom	Total anal symptoms (n = 166)	Reason for consultation (n = 25)	Revealed by questioning (n = 141)	p value ^a
Bleeding	77 (46.4%)	13 (52%)	64 (45.4%)	0.66
Anal pruritus	74 (44.6%)	11 (44%)	63 (44.7%)	1
Pain	57 (34.3%)	17 (68%)	40 (28.4%)	<0.001
Anal swelling	45 (27.1%)	12 (48%)	33 (23.4%)	0.01
Anal discharge	17 (10.2%)	1 (4%)	16 (11.3%)	0.47
Uncontrolled anal leakage	15 (9%)	3 (12%)	12 (8.5%)	0.70

^achi-square test p-value

Patients spontaneously consulting for an anal complaint in comparison with patients who revealed the symptoms after questioning

(Tournu et al., BMC Family Practice 2017; 18: 3of7)



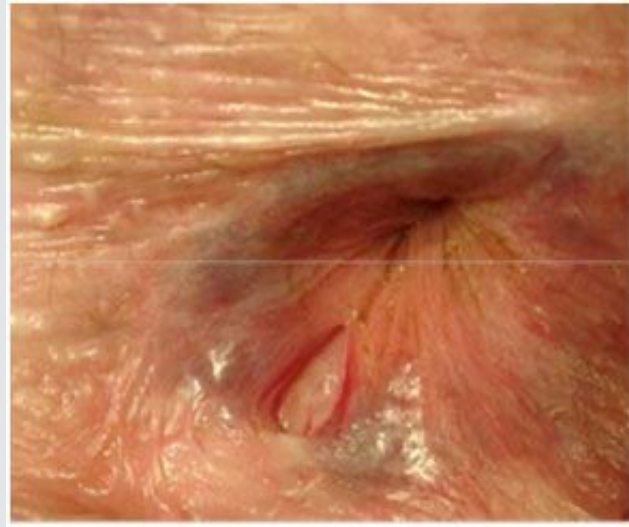
(Perveen et al. Isra Med J. 2022; 14:13-14)



Fissures

Background

- Linear tear from dentate line to anal verge
- Clinical presentation
 - Hx: pain, bright red bleeding (mild)
 - PE: effacement of buttock, DRE spastic sphincter



(FIGURE 1: ACUTE ANAL FISSURE. ADAPTED FROM "ANAL FISSURE" N. KHAN., YOUR PRACTICE ONLINE. RETRIEVED FROM [HTTPS://WWW.DRNAEEMKHAN.COM.AU/ANAL-FISSURE.HTML](https://www.drnaeemkhan.com.au/anal-fissure.html))

CLASSIFICATION

- Acute
 - <6 weeks duration
- Chronic
 - >6 weeks
- Typical
 - Posterior midline (73%)
 - Anterior (13% women, 8% men)
 - A+P (2.1%)
- Atypical
 - Lateral, multiple
- Causes
 - Typical; trauma, irritation to anal canal
 - Atypical; Crohn's, HIV, syphilis, TB, hematologic malignancies



Figure 2: Chronic anal fissure. Adapted from "Anal Fissure" G. Locke, 2017. Pictorial atlas of gastroenterological endoscopy. Retrieved from <https://www.endoskopiebilder.de/en/fissur-anal>

Chronic fissure

1. Exposed IS muscle
2. External skin tag
3. Proximal hypertrophied anal papilla

Etiology

Less structural support posteriorly

Hypertonicity of internal sphincter muscle

Relative ischemia at the site

When do we scope?

AGSE recommends when in doubt, to rule out IBD, if bleeding reoccurs, due for screening.

The American Society of Colon and Rectal Surgeons Clinical Practice Guidelines for the Management of Anal Fissures

Jennifer S. Davids, M.D.¹ • Alexander T. Hawkins, M.D., M.P.H.²
Anuradha R. Bhama, M.D.³ • Adina E. Feinberg, M.D.C.M.⁴
Michael J. Grieco, M.D.⁵ • Amy L. Lightner, M.D.³ • Daniel L. Feingold, M.D.⁶
Ian M. Paquette, M.D.⁷

On behalf of the Clinical Practice Guidelines Committee of the American Society of Colon and Rectal Surgeons

1 Division of Colon and Rectal Surgery, University of Massachusetts, Worcester, Massachusetts

2 Division of General Surgery, Section of Colon and Rectal Surgery, Vanderbilt University Medical Center, Nashville, Tennessee

3 Department of Colorectal Surgery, Cleveland Clinic, Cleveland, Ohio

4 Division of General Surgery, Joseph Brant Hospital, Burlington, Ontario, Canada

5 Division of Colon and Rectal Surgery, New York University, New York, New York

6 Division of Colon and Rectal Surgery, Rutgers University, New Brunswick, New Jersey

7 Division of Colon and Rectal Surgery, University of Cincinnati, Cincinnati, Ohio

Management

3. Compared with topical nitrates, the use of calcium channel blockers for chronic anal fissures has similar efficacy, with a superior side-effect profile, and can be used as first-line treatment. Grade of recommendation: strong recommendation based on moderate-quality evidence, 1B.

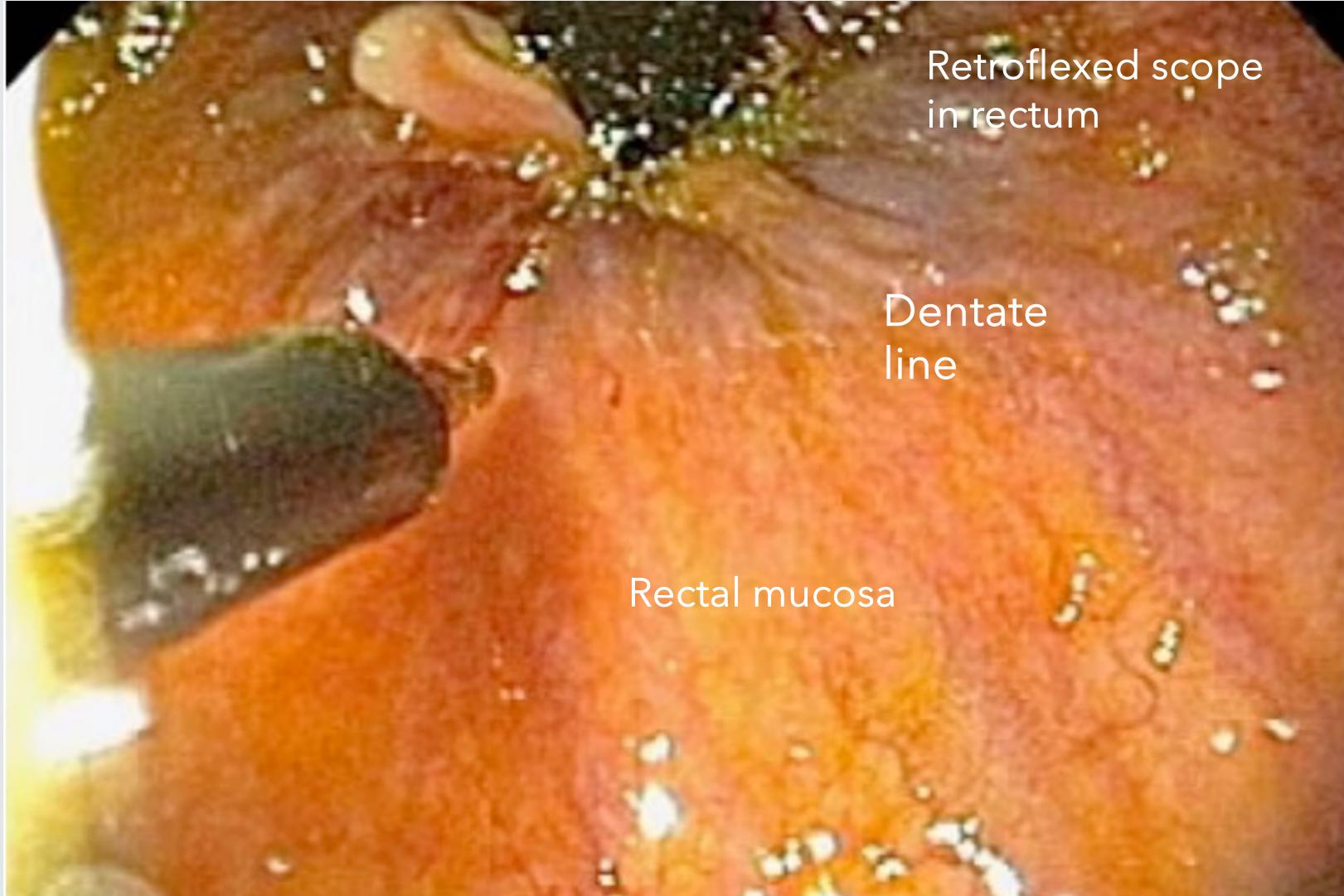
6. LIS is the treatment of choice for chronic anal fissures in selected patients without baseline FI. Grade of recommendation: strong recommendation based on high-quality evidence, 1A.

+ /- Advancement Flaps?

01 — **02** — **03** — **04**

1. Nonoperative treatment of acute anal fissures is safe and should typically be first-line treatment. Grade of recommendation: strong recommendation based on moderate-quality evidence, 1B.

4. Botulinum toxin has similar results compared with topical therapies as first-line therapy for chronic anal fissures and modest improvement in healing rates as second-line therapy following failed treatment with topical therapies. Grade of recommendation: strong recommendation based on moderate-quality evidence, 1B.



(FIGURE 3: ENDOSCOPIC BOTOX INJECTION ADAPTED ENDOSCOPE GUIDES PRECISE BOTOX DELIVERY FOR ANAL FISSURE TREATMENT BY E. SUSMAN, 2003, AUNTMINNIE.COM. RETRIEVED FROM [HTTPS://WWW.AUNTMINNIE.COM/IMAGING-INFORMATICS/ADVANCED-VISUALIZATION/IMAGE-GUIDED-SURGERY/ARTICLE/15565266/ENDOSCOPE-GUIDES-PRECISE-BOTOX-DELIVERY-FOR-ANAL-FISSURE-TREATMENT.](https://www.auntminnie.com/imaging-informatics/advanced-visualization/image-guided-surgery/article/15565266/endoscope-guides-precise-botox-delivery-for-anal-fissure-treatment))

Symptomatic Hemorrhoids



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Epidemiology

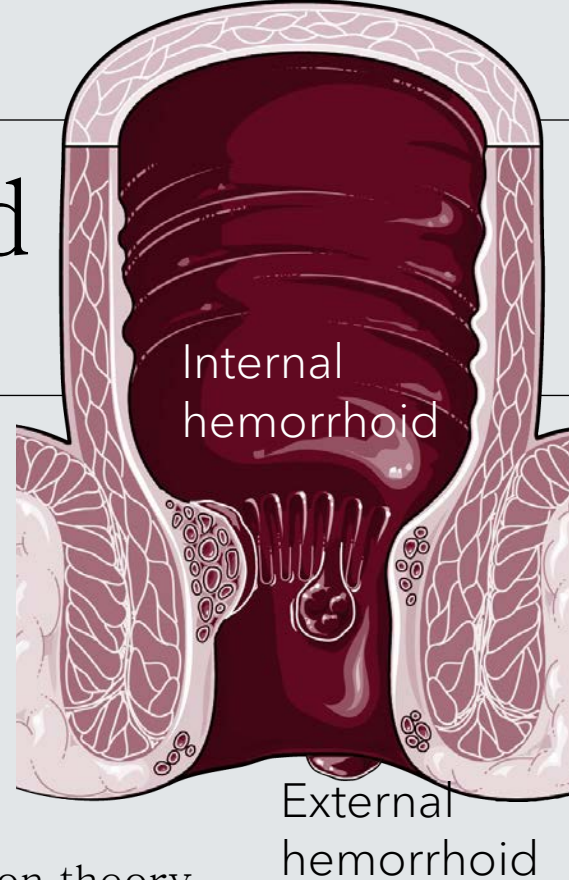
4.4%

Prevalence US population

> 10 000 000

Symptomatic patients

Background



- Thomson Vascular cushion theory
- Clinical presentation: bleeding, pain, protrusion, itchiness
- **Classification:**
 - Internal, external (Dentate line)
 - Goligher's (degree of prolapse)

- **Causes**
 - Multifactorial; dietary, behavioral, excessive straining, aging
 - **Factors that decrease venous return;** high sphincter tone, pregnancy, chronic cough, straining with defecation
- **Evaluation:**
 - Disease specific history, degree and duration of symptoms, underlying risk factors
 - Physical exam includes DRE, anoscope

Most patients present with rectal bleeding...

When do we scope?

?Endoscopic Evaluation

- AGE: endoscopic evaluation depends on age, symptoms, previous evaluation, and family history
- ASCRS: age (>50), or age >40 with family history, or positive FIT/fecal-DNA test
- ESCP/SICCR: symptoms, anemia, to rule out IBD or CRCa, family and personal history

TABLE 3. Indications for Complete Colon Evaluation

1. Age ≥ 50 y if no complete examination within 10 y
2. Age ≥ 40 y or 10 y younger than the age at diagnosis with history positive for a single, first-degree relative with colorectal cancer or advanced adenoma diagnosed at age <60
3. Age ≥ 40 y or 10 y younger than the age at diagnosis with history positive for two first-degree relatives with advanced adenomas or colorectal cancer
4. Positive fecal immunochemical testing (FIT)
5. Positive FIT-fecal DNA test

Source: The Multi-Society Task Force on Colorectal Cancers.¹¹

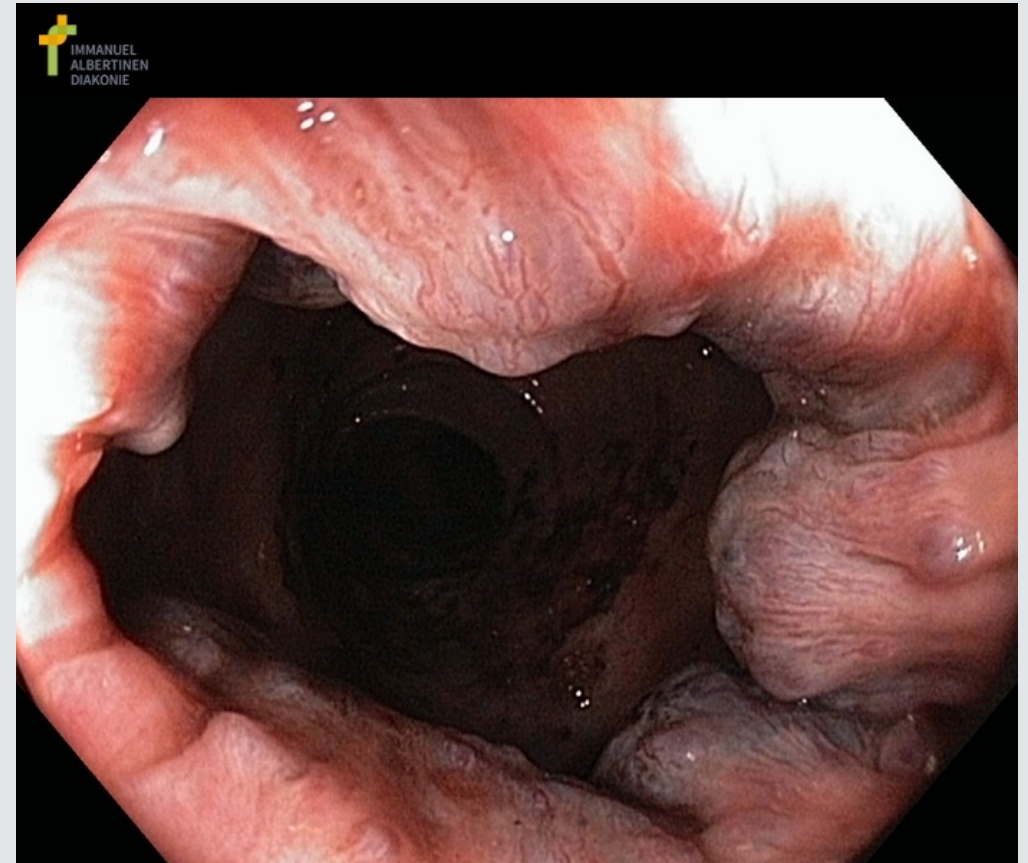


Figure 4: Hemorrhoids. Adapted from "hemorrhoids" G. Locke, 2017. Pictorial atlas of gastroenterological endoscopy. Retrieved from <https://www.endoskopiebilder.de/en/haemorrhoiden>

What about symptomatic younger patients?

What about hemorrhoids without bleeding?

Risk factors for early colorectal cancers

- O'Sullivan et al. 2023: literature review and meta-analysis of non-genetic risk factors for Early colorectal cancer. Diagnosed < 50 years of age.
 - 20 observational studies, total of 47 692 patients
 - First degree relative, hyperlipidemia, obesity, and alcohol consumption, caucasian, and male sex
-

Association with hemorrhoids and adenomas

Original article

 Thieme

Hemorrhoids as a risk factor for colorectal adenomas on colonoscopy

OPEN
ACCESS

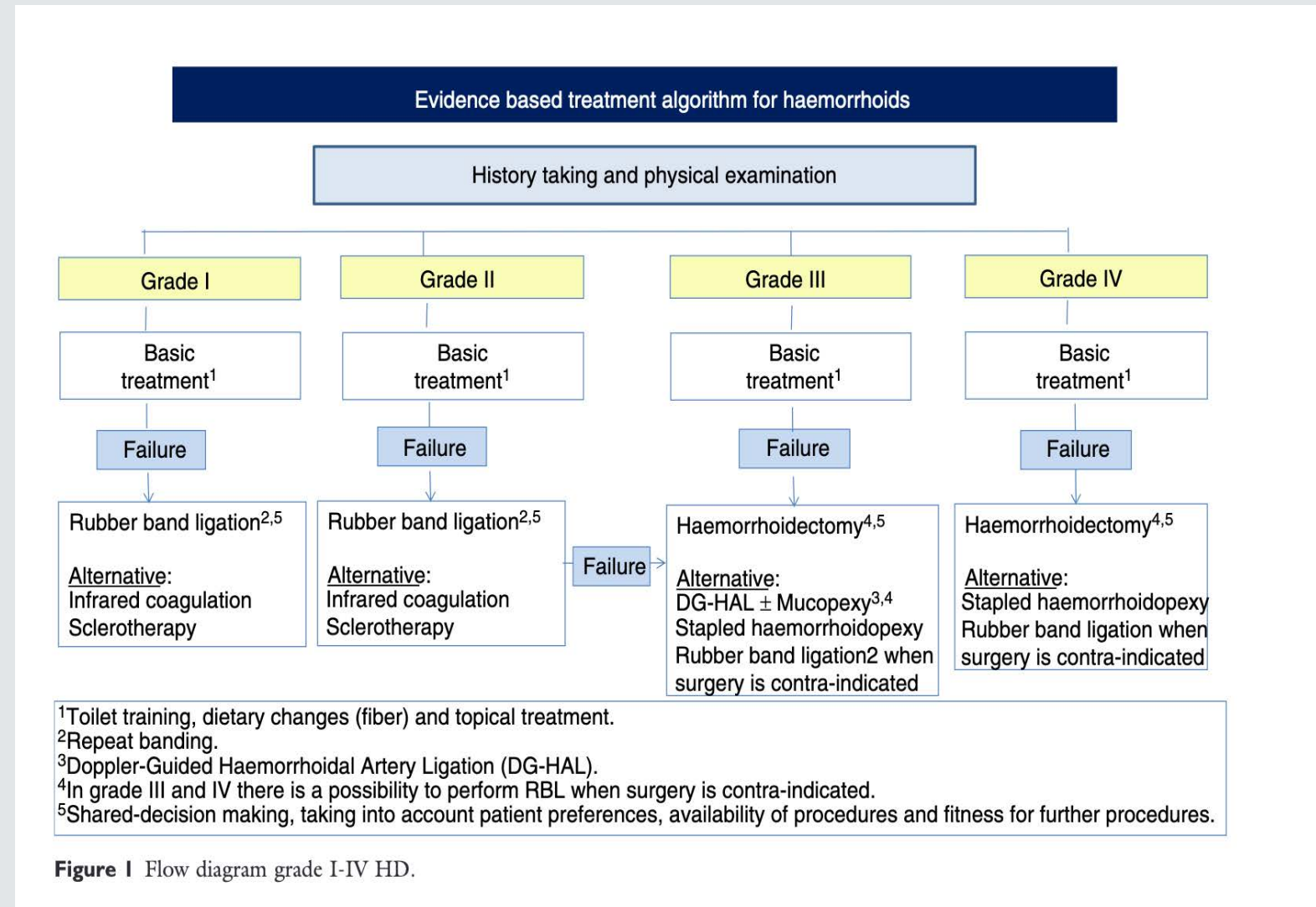


Authors

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Management

- **Lifestyle management:** increase fibre, fluids, limit straining (1B)
- **Medical:** Flavonoids, phlebotics (2B)
- **IH:** office treatments with banding, sclerotherapy, infrared coagulation (1A)
- **Thrombosed EH:** early surgical excision, quicker recovery
- **Surgery:** Excision gold standard (1A), doppler guided artery ligation, stapled haemorrhoidopexy
 - Multimodal pain postop



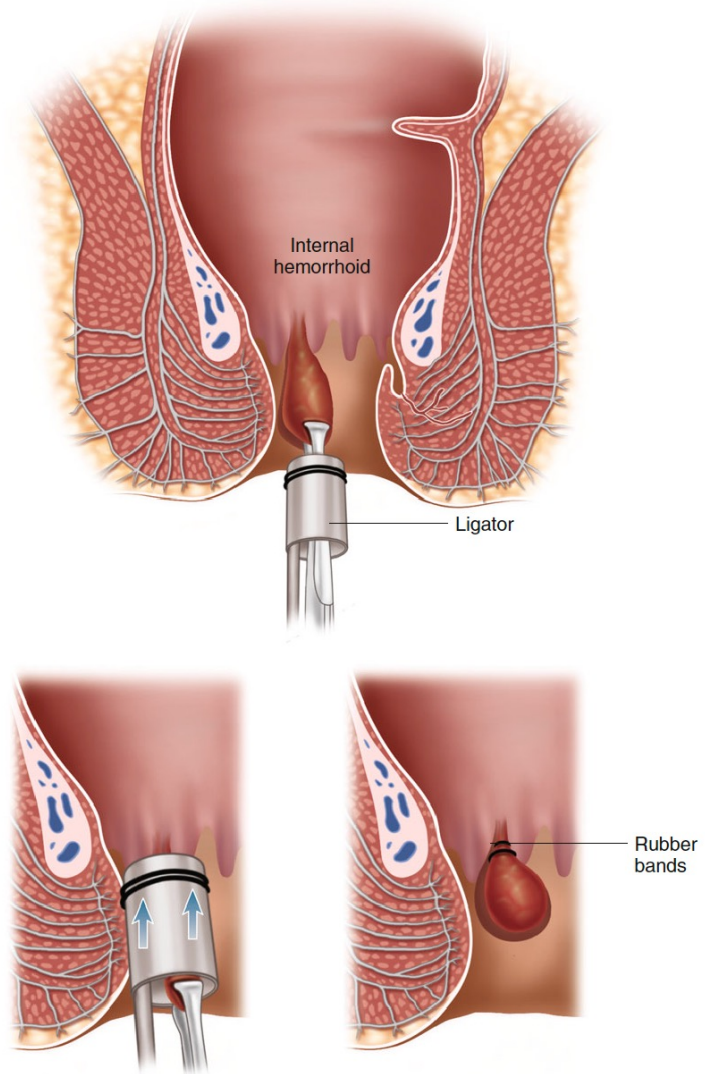
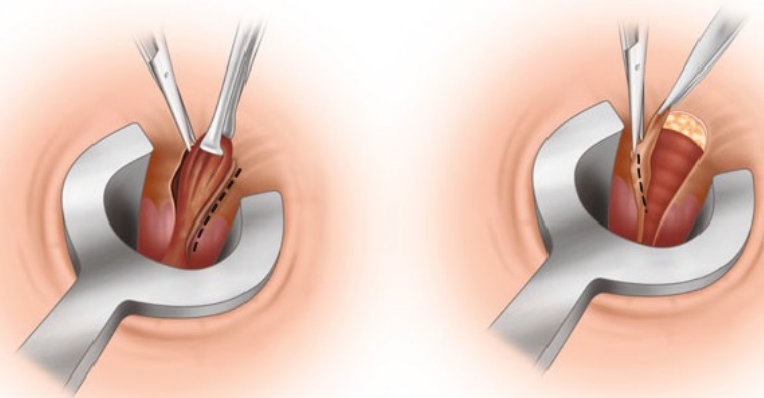


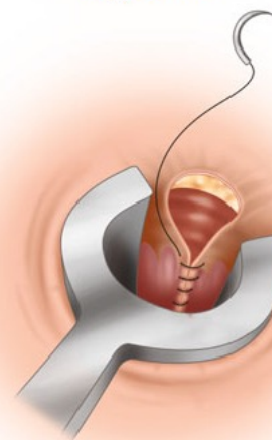
FIGURE 12-5. Hemorrhoid banding technique.

(STEELE, S. ET AL. 2016. THE ASCRS TEXTBOOK OF COLON AND RECTAL SURGERY. 3:775-798)

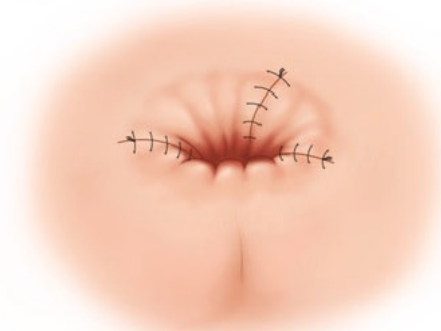


Ferguson A

Ferguson B



Ferguson C



Ferguson D

FIGURE 12-11. Closed hemorrhoidectomy.

Anorectal Abscess and Fistula



(STEELE, S. ET AL. 2016. THE ASCRS TEXTBOOK OF COLON AND RECTAL SURGERY. 3:889)

Epidemiology

0.4–5%

Incidence

68 000–96 000

New cases/year USA

Background

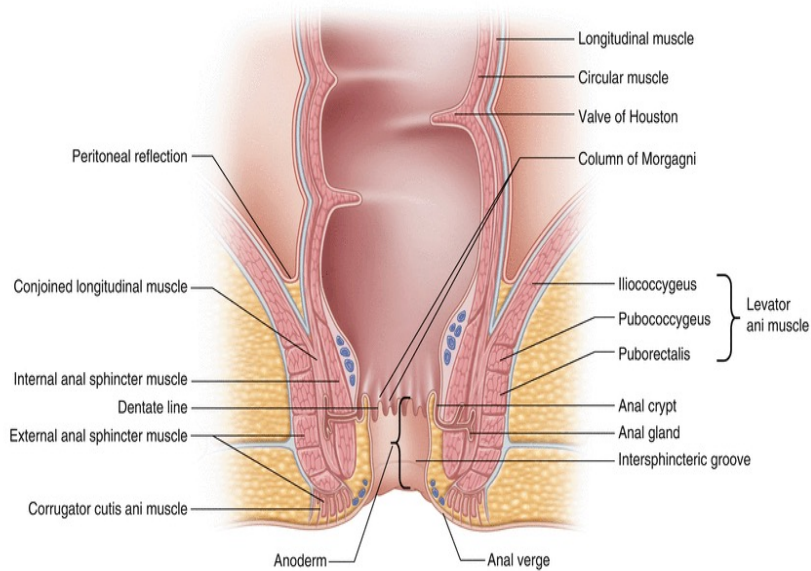
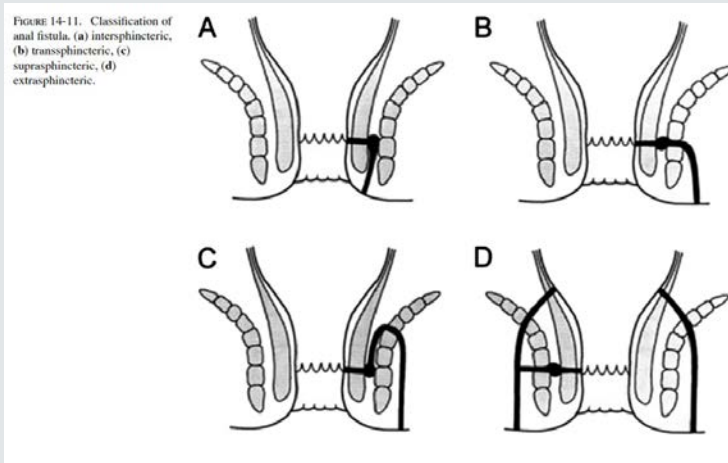
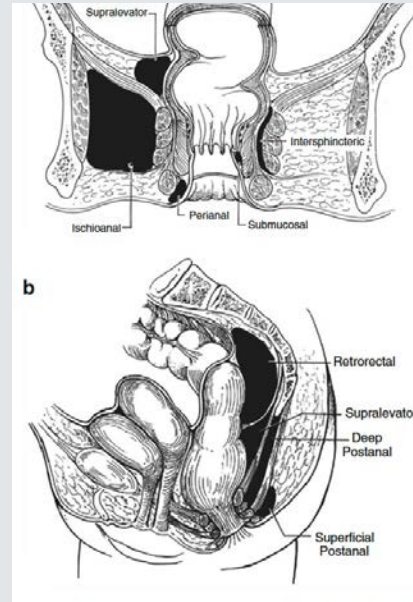


Figure 1-1. Anal canal.



- Pathophysiology: **abscess** obstructed anal gland + **fistula** is epithelization of abscess drainage tract
- Etiology:
 - 80-90% cryptoglandular
 - 10% “other” IBD, infectious (TB,STI), malignancy (anal, lymphoma, leukemia)
- Classification:
 - Abscess: based on anatomic space
 - Fistula: in relation to sphincter muscle (Parks)
 - Simple or complex



Clinical case



PE: diffuse, red, fluctuant area, anterior buttocks. tender. No obvious abnormality on DRE.

47M

- Kugluktuk, NU
- Acute onset perianal pain, fevers.
- Similar episode 1 year ago with spontaneous drainage, did not seek medical care

PmHx: Healthy, no Surgeries

Meds: None **Allg:** None

Social: smoker. No ETOH.

Family history: skin boils



(Figure 5: Perianal abscess. Adapted from "anal abscess" Rana Hospital. 2021. Retrieved from [https://www.ranapileshospital.com/project/anal-abscess/.](https://www.ranapileshospital.com/project/anal-abscess/))

What next? Do we need imaging? Antibiotics?

220

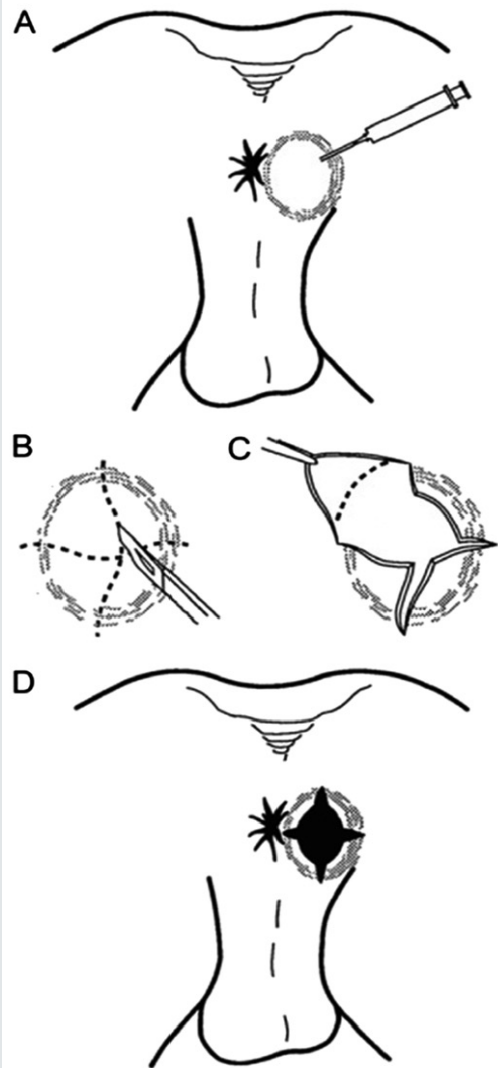


FIGURE 14-4. Drainage of abscess: (a) injection of local anesthesia, (b) cruciate incision, (c) excision of skin, (d) drainage cavity.

(STEELE, S. ET AL. 2016. THE ASCRS TEXTBOOK OF COLON AND RECTAL SURGERY. 3:5125)

2. Routine use of diagnostic imaging is not typically necessary for patients with anorectal abscess or fistula. However, imaging may be considered in selected patients with an occult anorectal abscess, recurrent or complex anal fistula, immunosuppression, or anorectal Crohn's disease. Grade of recommendation: strong recommendation based on moderate-quality evidence, 1B.

3. Patients with acute anorectal abscess should be treated promptly with incision and drainage. Grade of recommendation: strong recommendation based on low-quality evidence, 1C.

5. Antibiotics should typically be reserved for patients with an anorectal abscess complicated by cellulitis, systemic signs of infection, or underlying immunosuppression. Grade of recommendation:

(Gaertner, W. et al. DIS Colon rectum 2022;65:967-75)

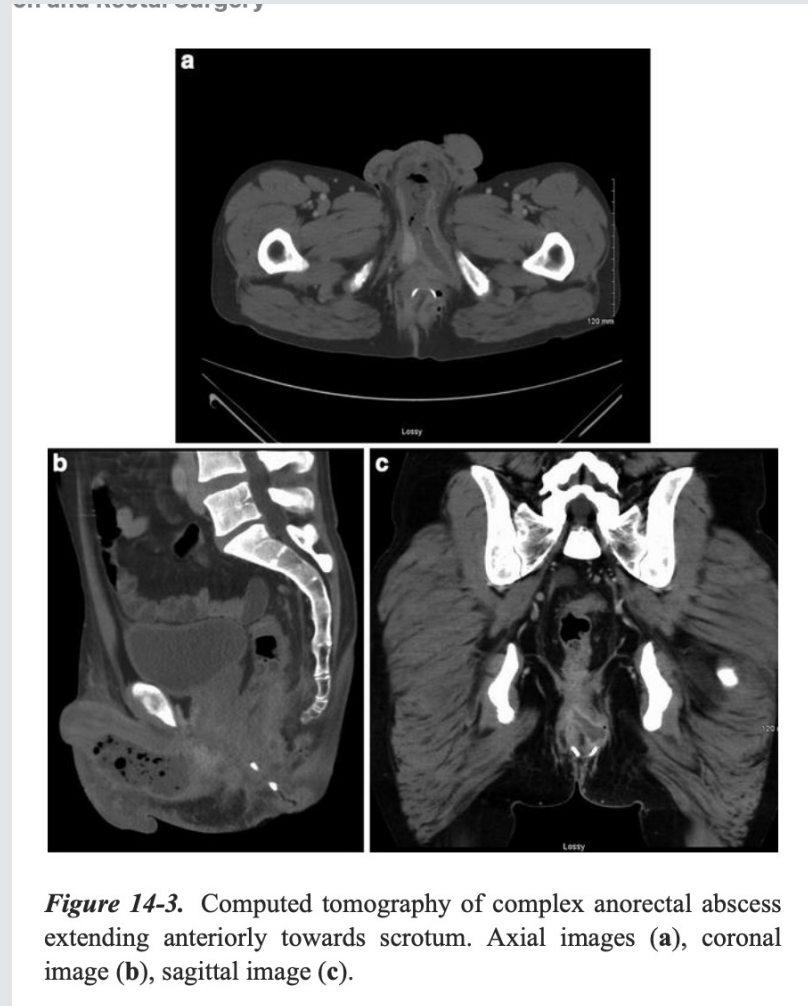
Clinical case continued...

Patient returns 6 weeks later with recurrent symptoms. On physical exam, the abscess is more anterior and away from his previous I+D.

I+D is repeated in OR and no fistula noted.

Patient is sent home. Booked for outpatient colonoscopy.

Colonoscopy: Normal, but posterior midline fistula with internal, external opening now visualized



30–50% abscesses drained will develop into fistulas.

Perianal Hidradenitis Suppurativa



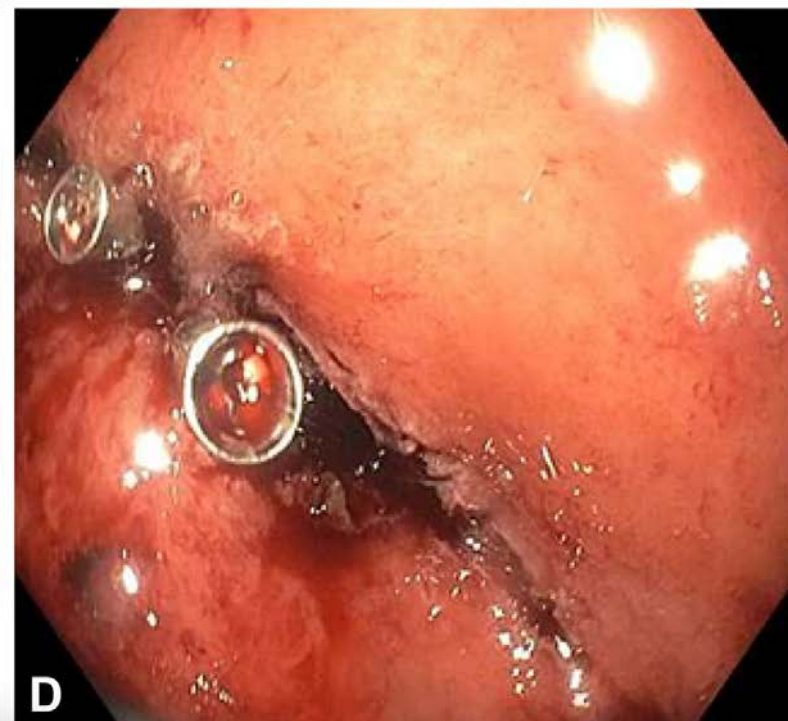
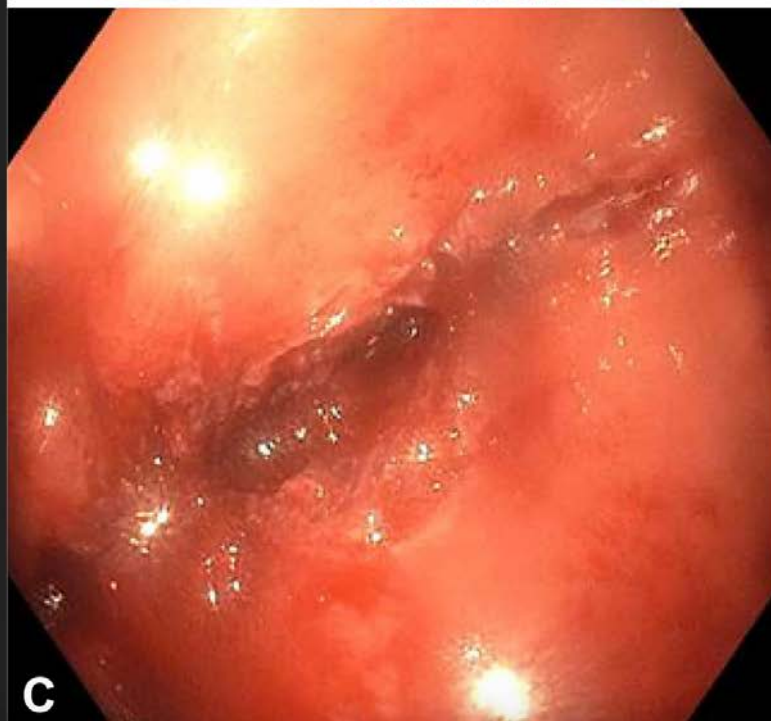
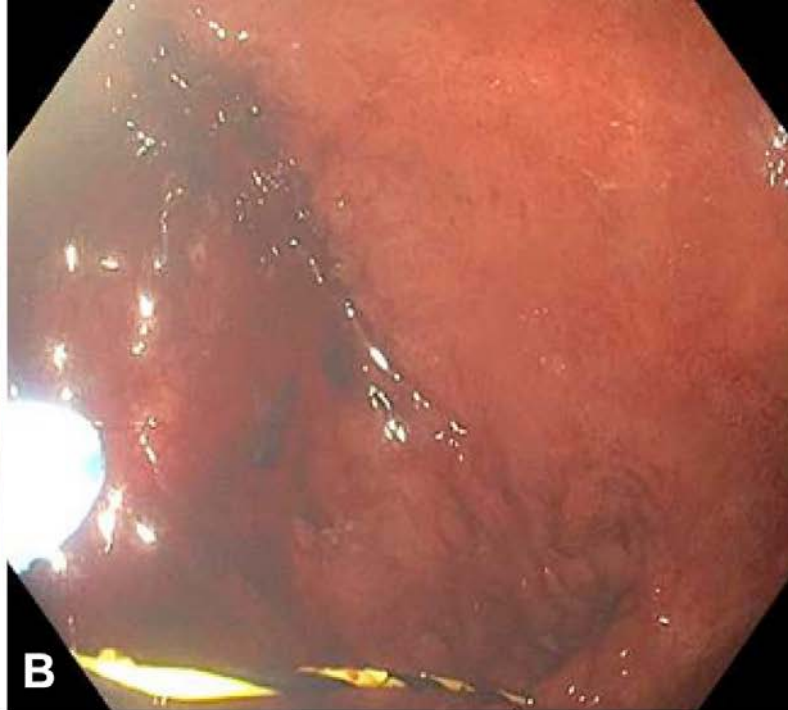
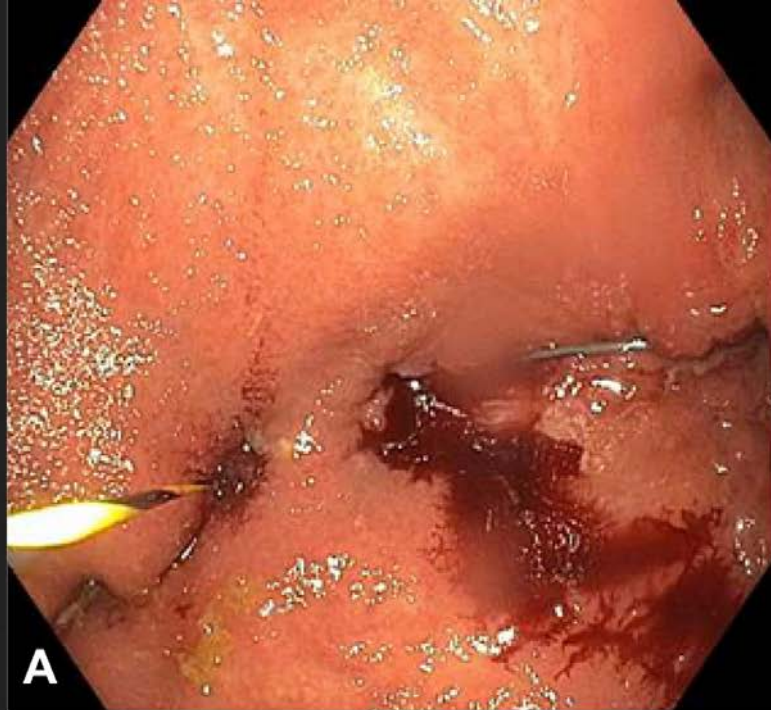
- MRI ordered confirming fistula tract. Patient brought in to discuss imaging.
- Patient PE demonstrated acute infection with purulent drainage through multiple sinus tracts, extending into the perineum + scrotum.
- patient placed on Abx (tetracycline).
- Urgent EUA and I+ D 1 week later. Purulent drainage resolved. Sinus tracts blind ended. EUA normal.

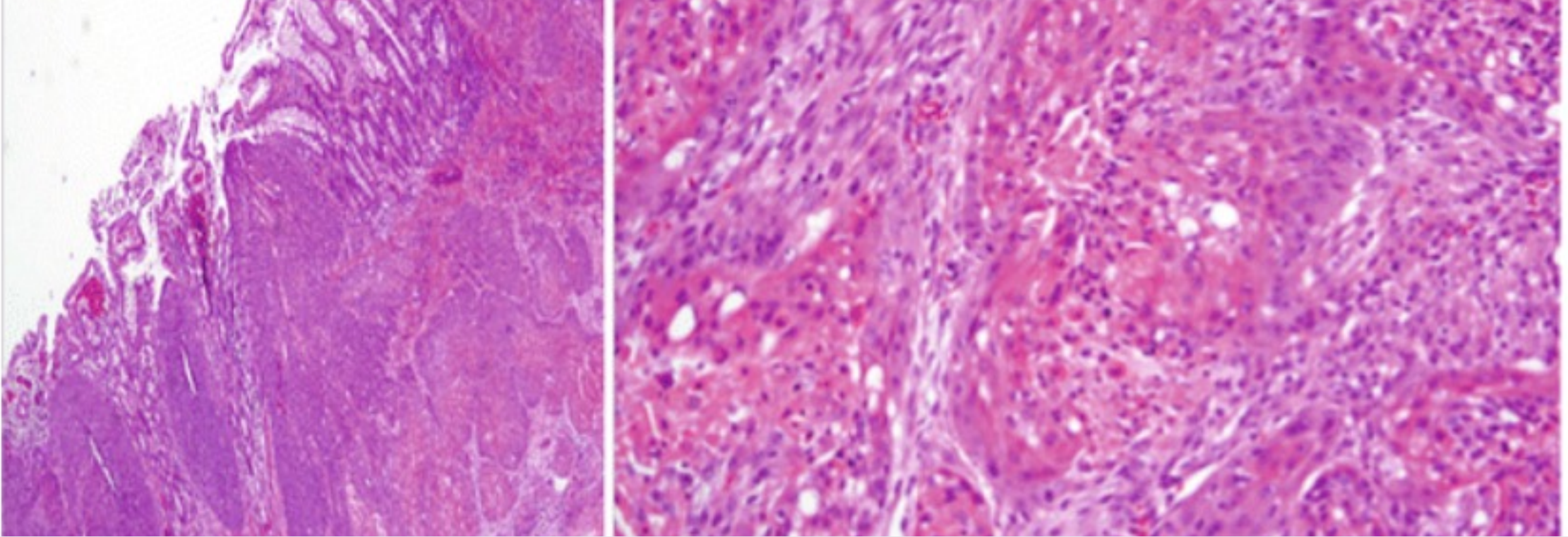
Anal fistula management

1. Elimination sepsis
2. Closure of fistula tract
3. Preservation of the sphincter and avoidance of incontinence
4. Minimize recurrence

10. The anal fistula plug and fibrin glue are relatively ineffective treatments for fistula-in-ano. Grade of recommendation: strong recommendation based on moderate-quality evidence, 1B.

- Choice of treatment: depends on amount of sphincter muscle involved
- Low trans-sphincteric or intersphincteric: fistulotomy (highest success rate 90%)
- Higher, complex fistula: endorectal advancement flap, LIFT procedure, ?cutting seton. (70% success rates)
- CD: combination of medical and surgical.
- Emerging: FiLac, VAAFT, endoscopic techniques , cell-based therapies, BioLIFT





(STEELE, S. ET AL. 2016. THE ASCRS TEXTBOOK OF COLON AND RECTAL SURGERY. 3:1429)

Anal Cancer

Epidemiology

4%

Of all GI tract cancers

0.5%

New cases/year USA

Background

- Anatomy of anal canal can be complex; upper 2/3 is columnar epithelium, lower third is squamous epithelium
 - Anal transition zone is 1-2cm proximal to the dentate line and is an area of metaplasia
 - Etiology; HPV virus 16 + 18 (primary). Immunosuppression.
 - Classify anal lesions into 3 regions based on visual inspection
 - intra-anal (require traction of buttock)
 - Peri-anal (w/n 5 cm)
 - Skin lesions (>5cm)
-

Squamous Cell Carcinoma of the anal canal

- Age 60–65, W>M
- 1/3 do not have symptoms or nonspecific
- **Clinical Presentation**
 - Rectal bleeding, anal pain or sensation of anal mass, pruritus, incontinence, discharge, abscess or fistula
- **Physical exam:** anal region, DRE, lymph nodes, anoscope, +/- flexible sigmoidoscopy, gynecological if women

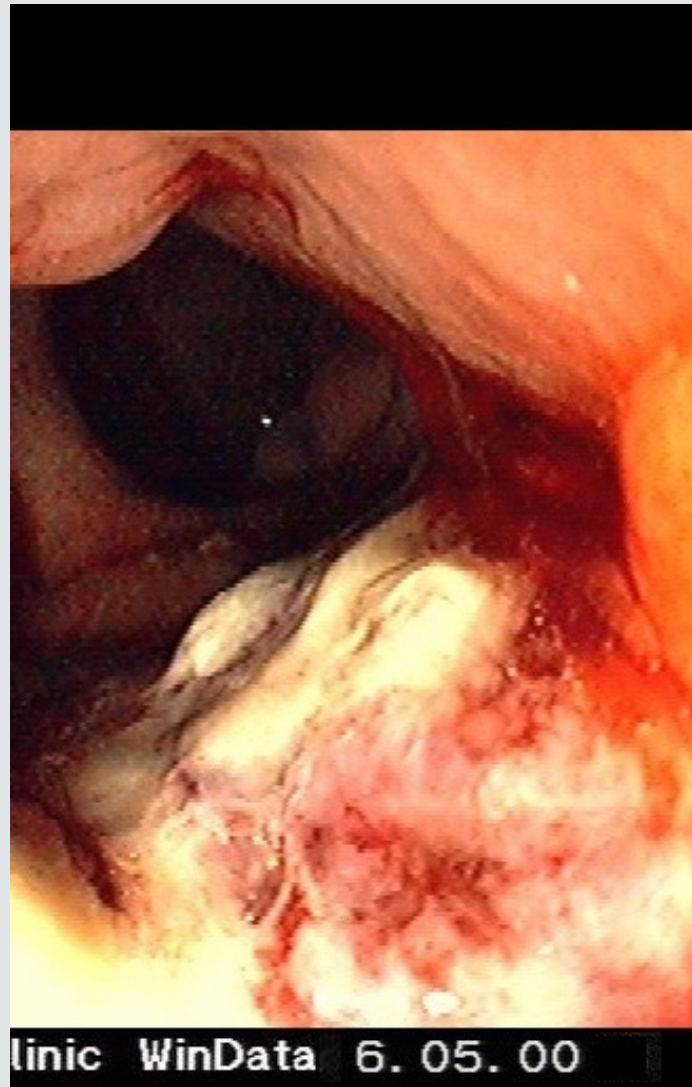


Figure 7: Anal cancer. Adapted from "Ingrowing Tumour" G. Locke, 2017. Pictorial atlas of gastroenterological endoscopy. Retrieved from <https://www.endoskopiebilder.de/en/endoscopy-pictures/anus-rektum/tumors>

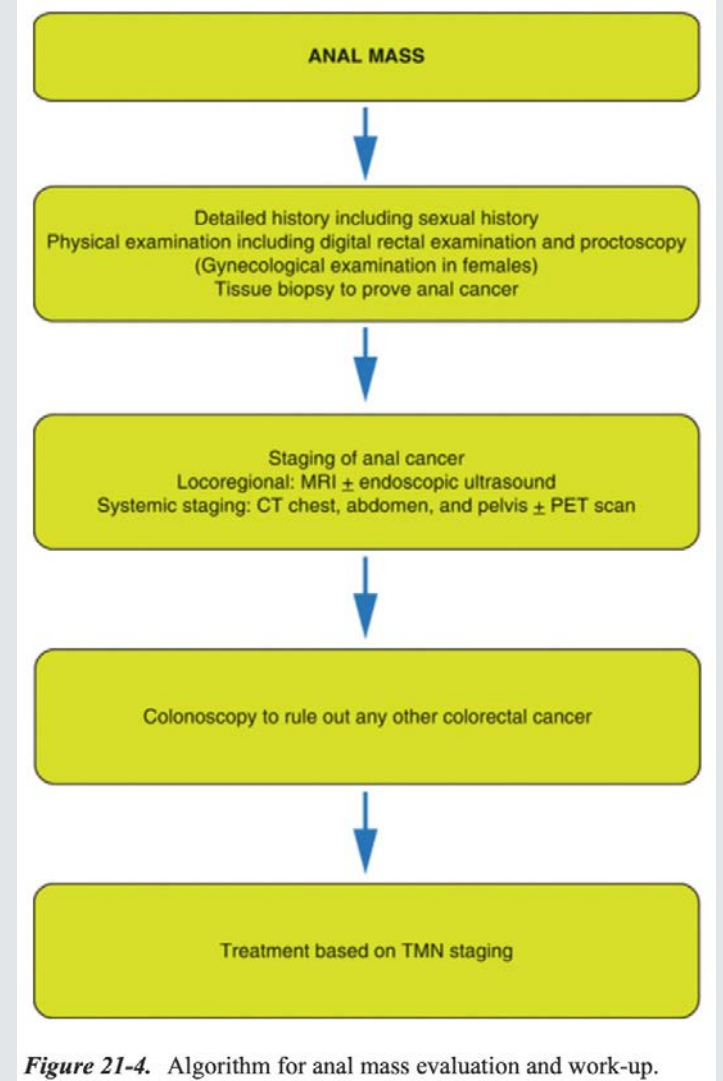


Figure 21-4. Algorithm for anal mass evaluation and work-up.

Initial work up and management

Current Management Protocol (Fig. 21-13)

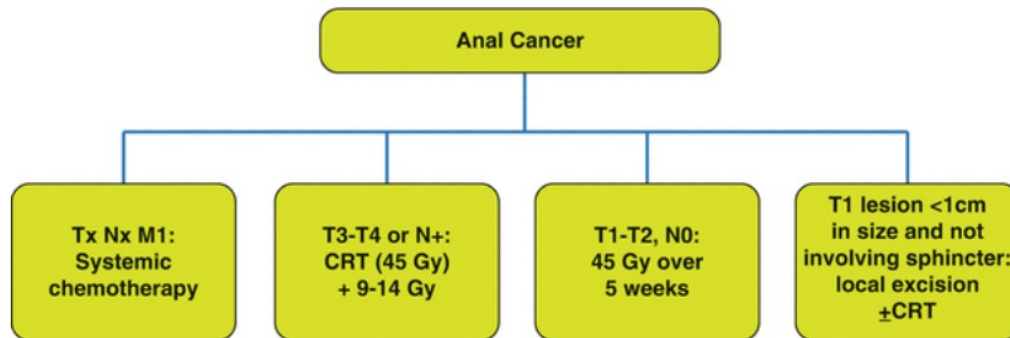
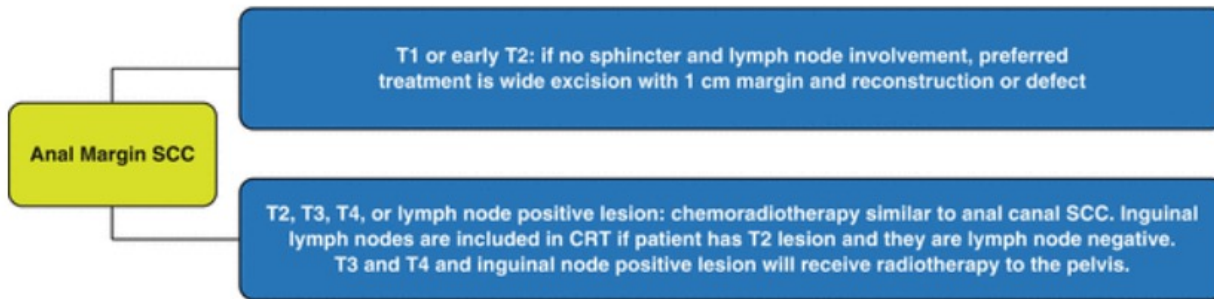


Figure 21-13. Anal cancer treatment.

Limited Localized Disease: Stages I–III (Any T, Any N, M0)

- Initial Work Up Anal Cancer
 - T1 tumour: MRI loco-regional staging and CT chest/abdo/pelvis for metastatic
 - T2–T4 or Node + gets PET/CT to screen distant mets, response to CRT
- Clinical follow up post treatment
 - Repeat PE anal area 8–12 weeks, and 6– to 8– week intervals
 - 6M– persistent or progressive disease– restage, Bx, and salvage (LE or APR)



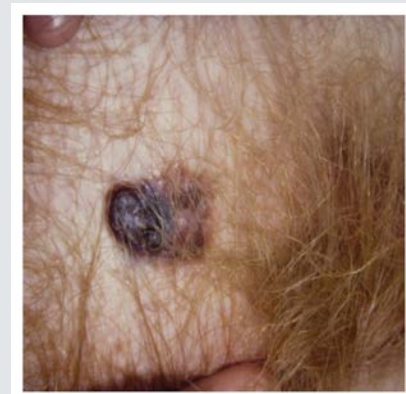
(STEELE,S.ET AL.2016. THE ASCRS TEXTBOOK OF COLON AND RECTAL SURGERY.1458)



Fig. 3 A Buschke–Löwenstein tumor (Photo–M. Valente).

(Abbass et al. Clin Colon Rectal Surg 2019)

- **Anal melanoma**
 - 1-4% anorectal malignancy
 - Poor prognosis
- **Anal margin SCC**
 - 1/3 anal SCC
 - Treated as SCC of the skin
- **Anal adenocarcinoma**
 - Rare, 3% anal malignancy
 - Colorectal type, fistula, or anal glands



Summary

Focused history and physical exam is the most important part! Including Anoscopy.

High index of suspicion for anal and colon cancers

Do not be afraid to Scope! Biopsy! Refer!

Thank you!

QUESTIONS?

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