OneGI

SECOND ANNUAL GI & LIVER *Summit*

Hemorrhoids: Essential Information Often Overlooked

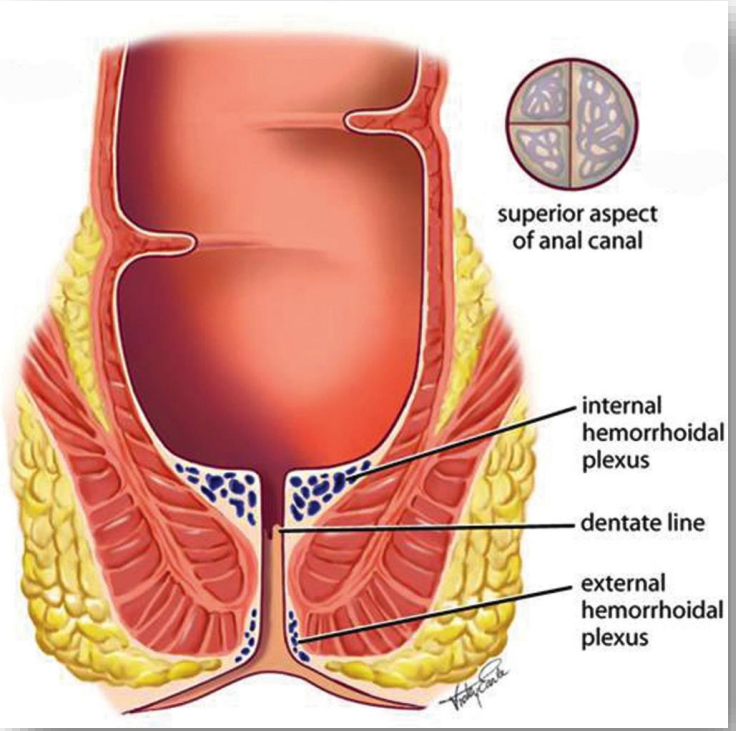
Chantil Jeffreys DNP, JD
APP Clinical Director
Gastro One
Powered by One GI
Germantown, TN

Objectives

1. Improving Diagnostic Skills.
2. Diagnosis and management of hemorrhoids and fissures.
3. Diagnosis and management of other common anorectal complaints.

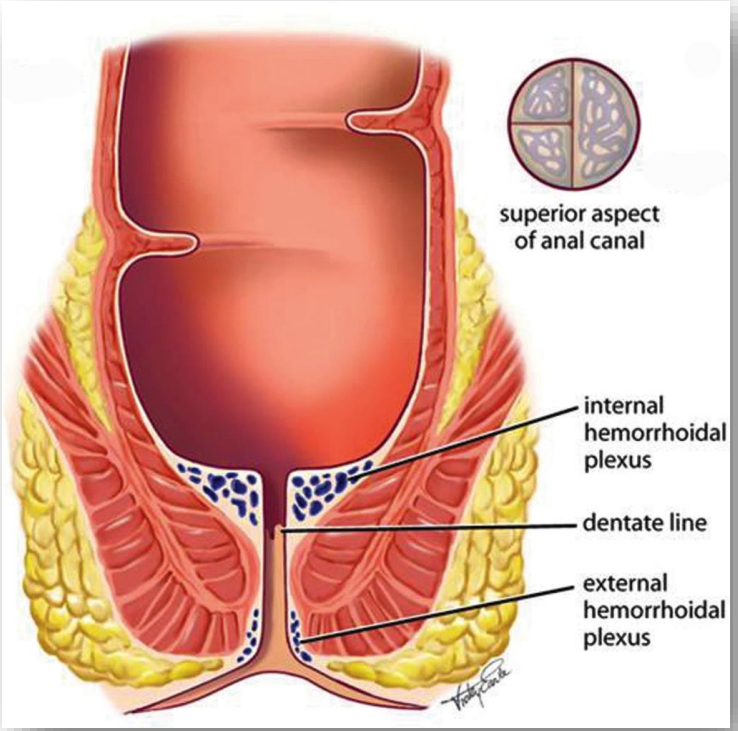
Anatomy of the Anal Canal

- 3 Cushions (LL, RA, RP).
- Fibrovascular Tissue.
- Role in continence.
- “Anchored” by Muscularis Submucosae.
- “Internal” hemorrhoids covered by mucosa (columnar).
- “External” covered by anoderm (squamous).
- “Dentate Line” separates “internal” from “external”



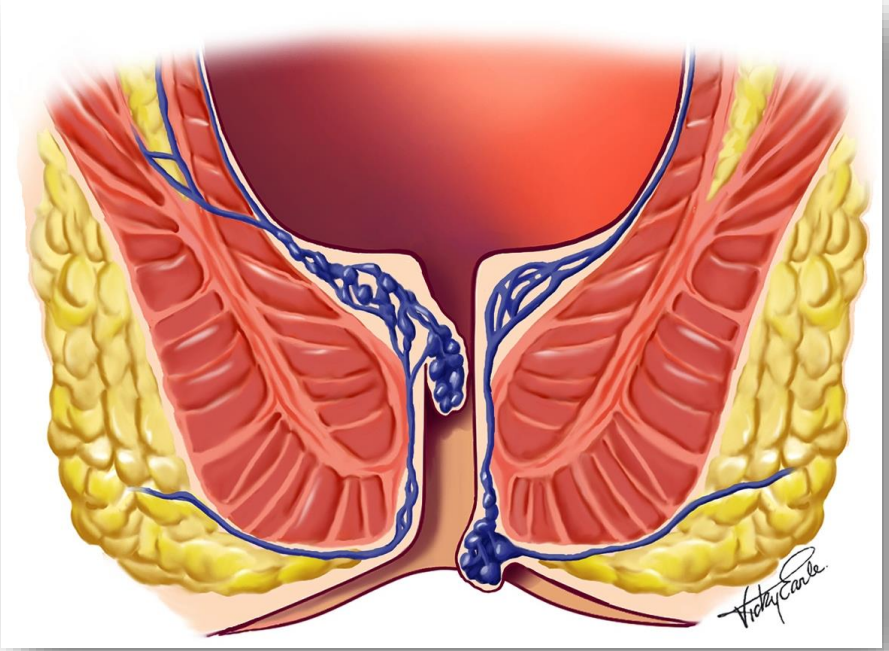
Physiology of Hemorrhoids

- Continence – 15–20% of anal closure pressure.
- “Protective” function.
- Arteriovenous connections allow for swelling of cushions in response to valsalva.



Pathophysiology of Hemorrhoids

- Muscularis submucosae becomes fibrotic.
- Fibrotic fibers break down allowing for slipping & prolapse.
- ***It is the PROLAPSE and slippage that causes problems with hemorrhoids***.
- At least 20% have coexistent anal fissures.



Epidemiology

- Risk factors include:
  - Inadequate fiber and fluid intake, constipation
  - Behavioral – sedentary lifestyle, spend too long on commode
  - Increased abdominal pressure
  - Spinal cord injury
  - Decreased connective tissue strength
  - Increased anal sphincter pressure
  - **NO CORRELATION WITH PORTAL HYPERTENSION!**
- Unusual in patients less than 20 years old
- Peak incidence from 45–65 years old
- Prevalence noted from 4.4%–40%
- 75% will have symptoms during lifetime

Symptomatic Hemorrhoids

- **ITCHING** Prolapsing hemorrhoids deposit mucus on perianal skin
- **BLEEDING** Tissue friability, arteriolar source of blood
- **SWELLING** External disease as extension of internal hem's (mixed)
- **PROLAPSE** Frank prolapse of hemorrhoidal tissue
- **SOILING** Prolapsing tissue interferes with anal closure
- **PAIN?** **INTERNAL HEMORRHOIDS DON'T HURT*!!!**

Grades of Hemorrhoids

PROLAPSE IS THE PROBLEM!!

- **Grade 1** No prolapse – may cause painless bleeding.

- **Grade 2** Prolapse on defecation – reduce spontaneously
- **Grade 3** Prolapse and are manually reduced

- **Grade 4** Incarcerated – leading to mucoid discharge, bleeding, pain, necrosis

It is VERY difficult to “grade” the patient at the bedside!!

Non-Surgical Treatments

- “Medical Management”
- Sclerotherapy
- Rubber Band Ligation
- Infrared Coagulation (IRC)
- Direct Current
- Bipolar Diathermy
- Cryotherapy

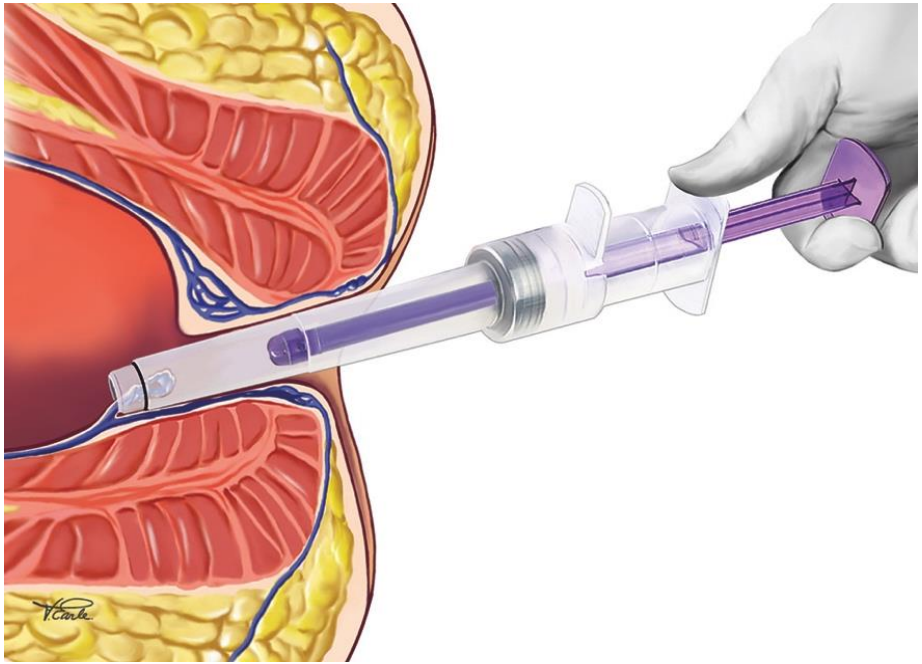
“Medical Management”

- Dietary Fiber
  - 15–20gm per day supplement
- Minimize time on commode
  - “Two minute rule”
- OTC Hemorrhoid products
  - Questionable efficacy
- **MINIMIZE USE OF STEROIDS!**

Rubber Band Ligation

- **1954:** Blaisdell first report of hemorrhoid ligation (suture)
- **1963:** Barron report on 150 patients banded in office
- **1999:** O'Regan develops disposable suction RBL
- **2005:** Cleator reports on 5,424 bandings in 1,852 patient.
  - 99.1% effective, 0.3% complications, 5% 2-yr recur.
- **2010:** Cleator f/u study 20,206 RBL in 6,690 pts. Confirms 2005 study with 13% recurrence at mean of 42 months
- **2017:** > 1,000,000 procedures performed
  - Banding normalizes the size of hemorrhoidal cushions
  - Inflammation "pexes" mucosa to underlying tissues.
  - External disease improves but tags may be left behind.

RBL – CRH O'Regan System



Indications for Banding

- Recurrent mild to severe disease.
- Itching, Bleeding, Prolapse.
- Grades I–III, with some grade IV’s.
- Patients with External Symptoms (90% of symptoms will resolve after internal banding).
- Complaints of “incontinence” when sphincter function intact (not true incontinence, but rather prolapsing mucosa is the issue – “leakage”).

Contraindications to Banding

- **Anticoagulants** such as warfarin and clopidorgrel are a relative contraindication to hemorrhoid treatment. ASA use with minimal increased risk of bleeding
- Dr. Cleator has banded patients on warfain (151 times in 61 patients) and had only one moderate bleed which required Rx. I have also banded patients on various anticoagulants without significant complications.
- In **portal hypertension** the rectal varices are treated by treating the portal hypertension. Rx fissures with NTG.
- In **pregnancy** try to avoid rectal procedures to avoid the rare complication of pelvic sepsis or the liability of abortion. Anal fissures may be treated with NTG.
- Avoid in cases with **other rectal processes** (Crohn's, ischemic or radiation proctitis, etc.)

Indications for Surgery

- Failed non-surgical treatments
- Not capable of tolerating office procedure
- Large external hemorrhoidal disease
- Some Grade IV hemorrhoids

In practice, the only patients requiring surgery are Grade IV patients that cannot be reduced, and patients with severe external disease.

Surgical Treatments

- Hemorrhoidectomy
- PPH (Procedure for Prolapsing Hemorrhoids)
- Doppler – Guided Ligation of Hemorrhoidal Vessels
  - Transanal Hemorrhoidal Dearterialization (THD)

Accompanied by significant expense, morbidity, loss of work, postoperative complications, but most studies demonstrate lowest recurrence rates.

CRH vs. RBL vs. Surgery
(PPH / Open)

	CRH	RBL	Surgery
Major Bleeding	0.36%	1–2%	1–2%
Significant Pain	**0.15%**	**5–60%**	**3–80%**
Thrombosis	0.09%	5–12%	1%
Urinary Retention	0%	<5%	1–16%
Pelvic Sepsis	0%	0–0.1%	0.5%
Perianal Infection	0%	<5%	1%
Rectal Stenosis	0%	0%	1.6–3%
Incontinence/Soiling	0%	0%	7–21%
Reoperation	0%	0%	4–8%
Total Complications	**0.9%**	1–6%	20–40%
Effectiveness	**99%**	44–95%	85–97%
Recurrence	**13%**	**11–66%**	**10–20%**
Death	0%	0–1%	0–2%

Differential Diagnoses

Conditions with similar Symptoms

1. Anal Fissure, Skin tags, pruritus ani, candidiasis.
2. Fistula +/- Abscess, Pilonidal Disease, IBD.
3. Rectal Prolapse.
4. Incontinence.
5. Tumors - Adenocarcinoma, Squamous Cell, Lymphoma, Melanoma.
6. Levator Syndrome, Proctalgia Fugax, Foreign Bodies.
7. STD's - Condyloma (HPV), Syphilis, Gonorrhea, Herpes, Chlamydia-LGV, Molluscum Contagiosum, Pediculosis Pubis, Trichomoniasis, Chancroid, CMV, and Scabies.
8. Traumatic proctitis.
9. Rectal varices.
10. Prostatitis.

Anal Fissure

- A linear tear in the anoderm caused by passage of a hard stool, diarrhea, straining, sitting too long.
- 80–90% posterior, 10–20% anterior.
- Ischemic – poor blood supply to posterior midline, worsened by sphincter spasm.
- Deep fissures expose underlying internal sphincter.
- “Passing razor blades” – c/o pain on defecation +/- bleeding.
- Associated hemorrhoids are very common.
- 20% of Hemorrhoid patients with fissures.

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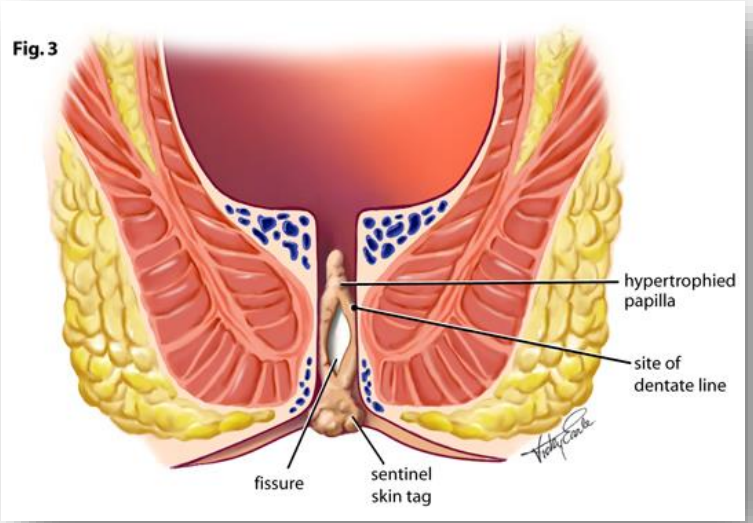

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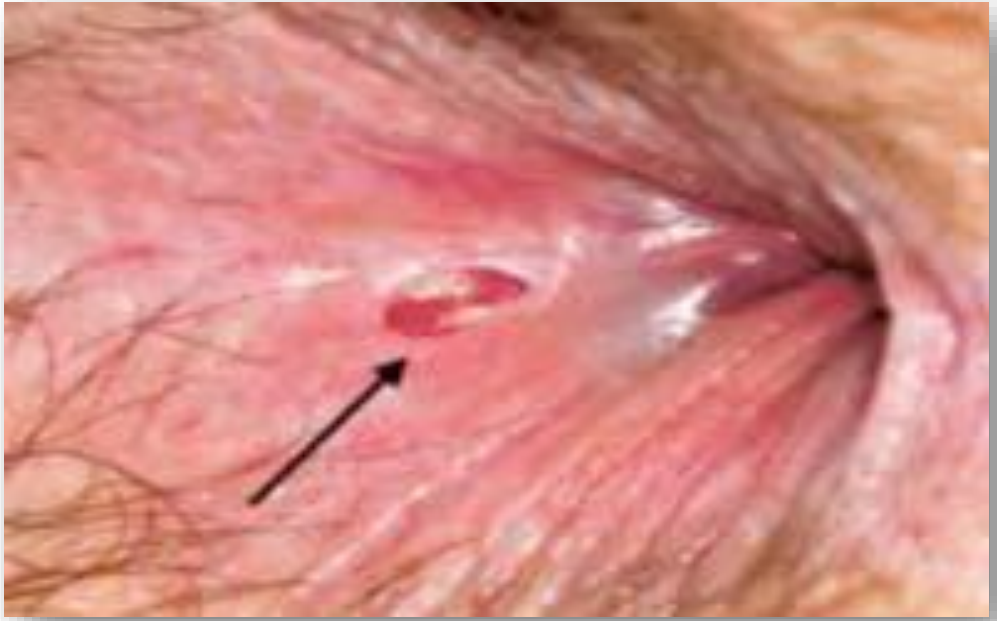


Expand Your Definition of a Fissure!

Once you've ruled out abscess, fistula or thrombosis, pain at the introitus in the midline typically equals a fissure!

- Tenderness in midline (posterior >>>> anterior)
- Presence of inflammatory tissue or healing scar
- A "rough" area surrounded by smooth tissue in midline
- Sentinel tag
- "Flare-ups" = Fissure!!

If patients have multiple fissures including those not in midline, rule out other processes (Crohn's? AIDS? TB? STD's?)

Anal Fissure Rx.

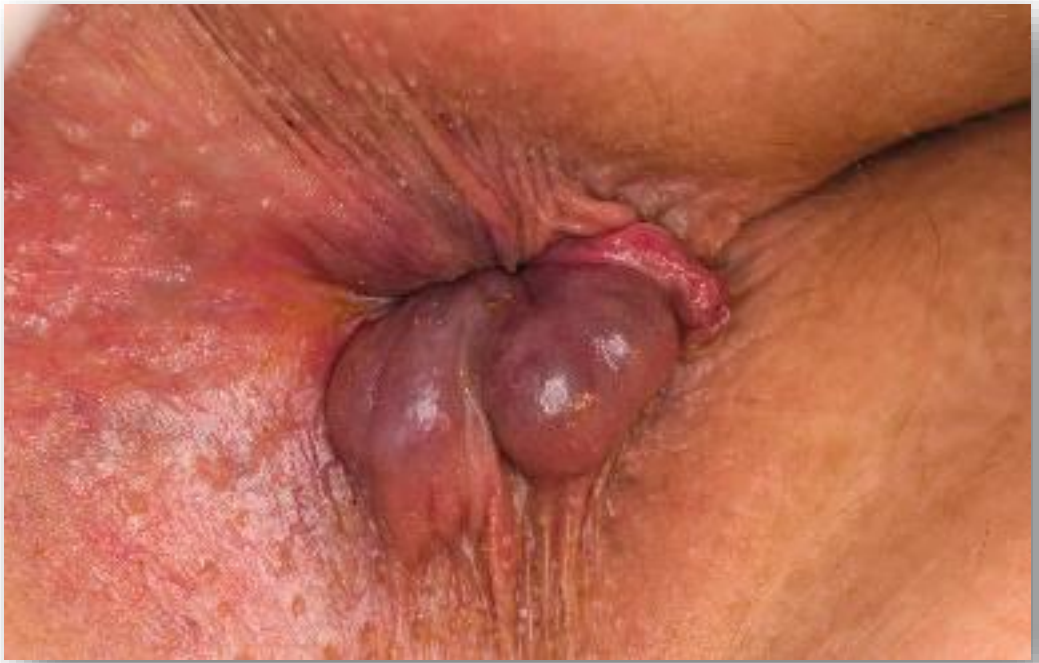
- **DIET** - Fiber (15–20 gm/day), fluids, “2-minute rule”, sitz baths.
- **TOPICALS**
  - **NTG ointment**, 0.125%. Typically takes 4–6 weeks to heal, continue Rx 2–3 more months!* (can be combined with 2% lidocaine).
  - 2% Diltiazem*, 0.2% Nifedipine.

  Patients must obtain these from a compounding pharmacy.
- **Botuliunum tonxin*** - “Chemical Sphincterotomy” – expensive!
- **SURGERY** – most effective, but up to a 10% incontinence rate (most studies report 2–4%).

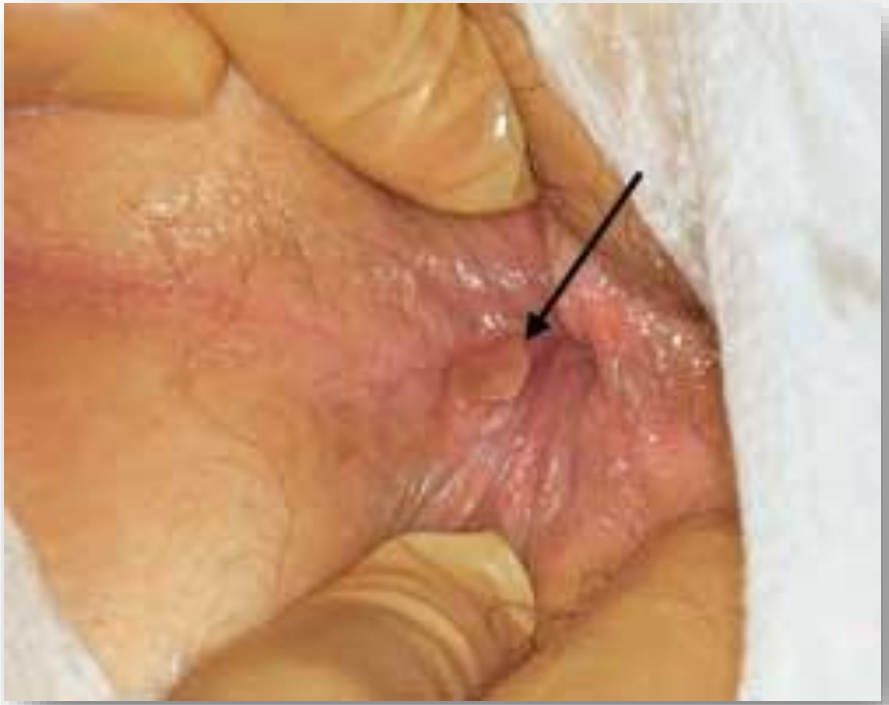
Topical NTG

- Nitroglycerin relaxes smooth muscle, decreases resting pressure, and improves blood supply. Effect up to 9 hrs.
- Side effects: hypotension, bradycardia, tachycardia, headache, rash, dizziness, dyspepsia, flushing, blurred vision, dry mouth, fainting.
- Be aware with congestive heart failure, calcium channel blockers, beta blockers. Avoid with sildenafil, tadalafil, etc.
- Has been used in pregnancy without difficulty but no studies on safety performed.

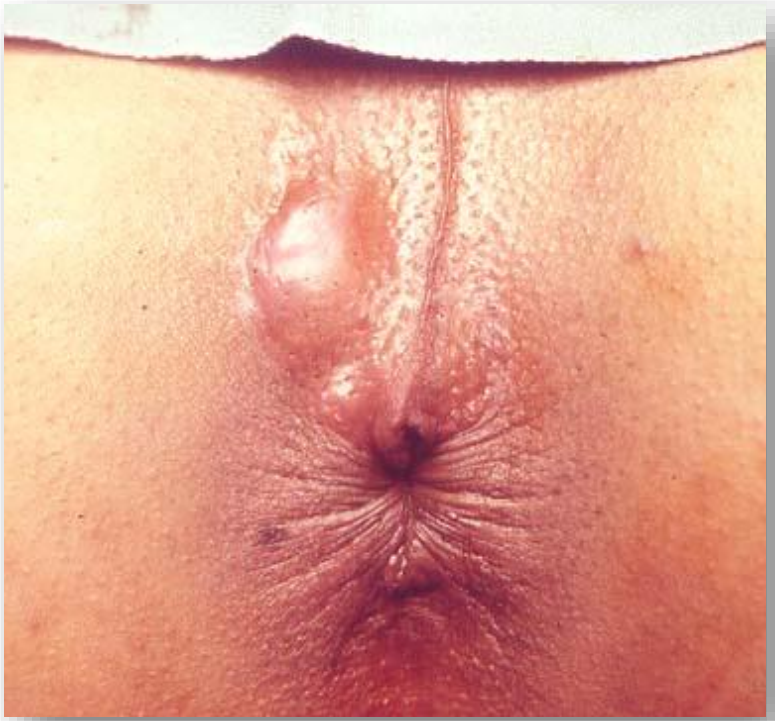
Thrombosed External Hemorrhoids



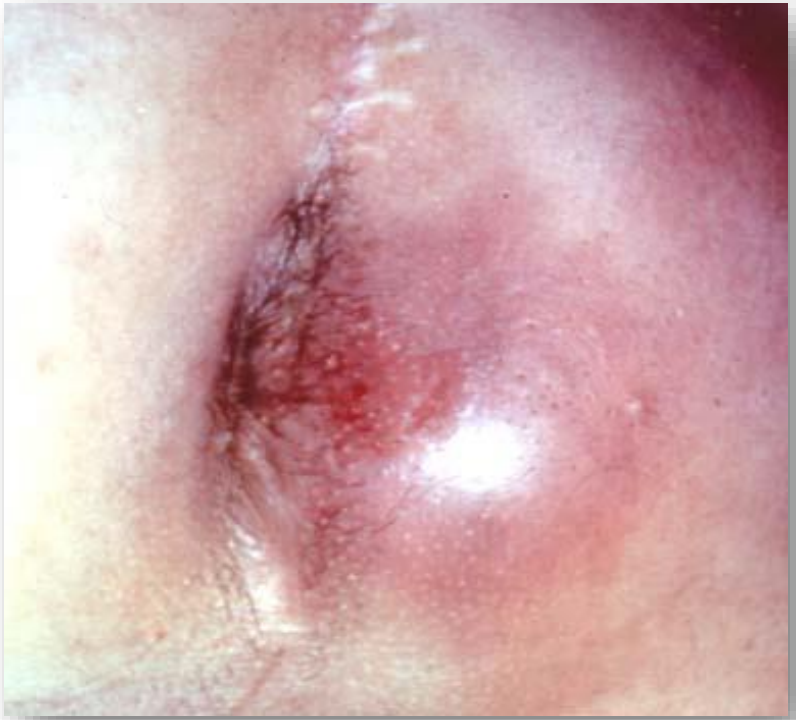
Anal Skin Tag



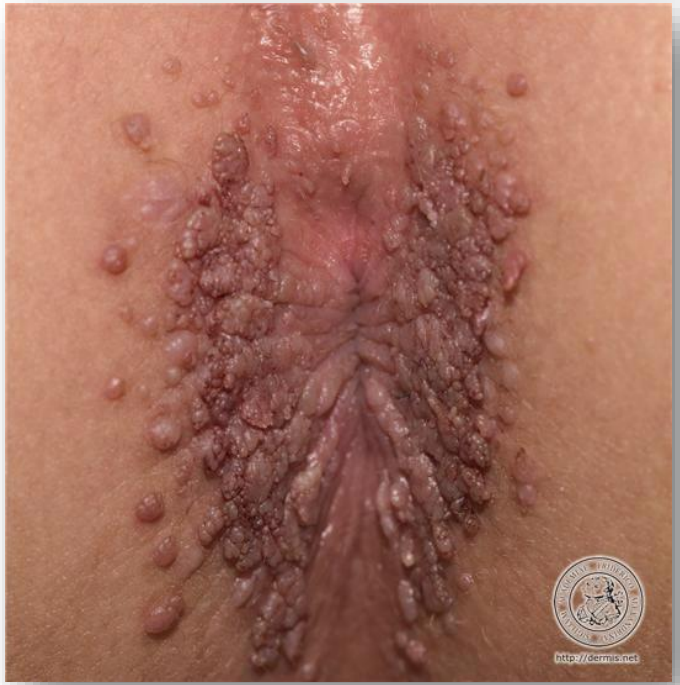
Perianal Abscess



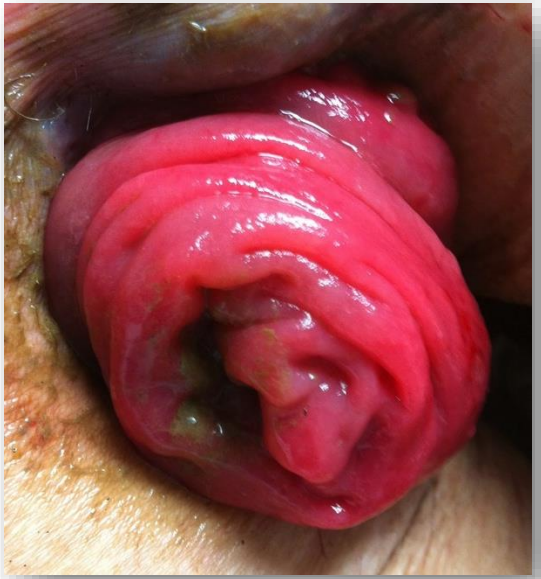
Ischiorectal Abscess



Condyloma



Rectal Prolapse



Summary

- In-office treatment of hemorrhoids safe and effective. Very few patients actually need surgical intervention.
- “Internal hemorrhoids don’t hurt”. Pain = associated issues present.
- **ANORECTAL EXAM IS VERY IMPORTANT**.
- Anoscopy is for the anus!