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Anoscopy

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Continuing Education Activity

Anoscopy is a bedside procedure that is inexpensive and can be performed quickly without bowel preparation or sedation. With this method, the examiner can visualize the internal portions of the anal sphincter and the distal rectum. Prospective studies suggest that anoscopy has a higher sensitivity for anorectal lesions such as internal hemorrhoids, proctitis, lacerations, fistulas, ulcers and masses than flexible sigmoidoscopy. This activity reviews the indications, contraindications, and techniques for anoscopy and highlights the role of the interprofessional team in the management of patients with anorectal pathology.

Objectives:

- Identify the technique involved in performing anoscopy.
- Describe the indications for anoscopy.
- Review the contraindications to anoscopy.
- Explain a structured, interprofessional team approach to alleviate discomfort and provide effective care and appropriate surveillance for patients undergoing anoscopy.

Earn continuing education credits (CME/CE) on this topic.

Introduction

Anoscopy is a bedside procedure that is inexpensive, can be performed quickly without bowel preparation or the need for sedation. With this method, the examiner can visualize the internal portions of the anal sphincter and the distal rectum. Prospective studies suggest that anoscopy has a higher sensitivity for anorectal lesions such as internal hemorrhoids, proctitis, lacerations, fistulas, ulcers, and masses than a flexible sigmoidoscopy. Up to 50% of rectal bleeding can be falsely attributed to hemorrhoids without internal examination to confirm this diagnosis.[1][2][3][4]

Anatomy and Physiology

The most significant visible structures of the lower gastrointestinal (GI) tract including:

- The four cm-long anorectal canal
- The midpoint of the anorectal canal known as the dentate line (the transition between the distal squamous and proximal columnar epithelium)
- The anal glands

- Longitudinal mucosal folds of the columns of Morgagni which terminate in small crypts (of consequence since they can become obstructed and subsequently infected).

Hemorrhoids are clusters of vascular, connective, and smooth muscle tissue which exist in the left lateral, right anterior, and right posterior portion of the anal canal. While internal hemorrhoids drain into the middle and superior rectal veins, patients with portal hypertension nonetheless do not have an increased incidence of varies. Since internal hemorrhoids lie above the dentate line, they have visceral innervation and are not painful, but they may become symptomatic due to bleeding and/or prolapse from the rectal canal. Severely prolapsed internal hemorrhoids may be painful if strangulated, and secondarily ischemic Conversely, external hemorrhoids emerge inferior to the dentate line and have somatic innervation from the perianal skin and can cause significant discomfort. Anoscopy can be useful to characterize the presence of enlarged internal hemorrhoids, but external hemorrhoids may preclude anoscopy due to discomfort.

Indications

This procedure can be useful in individuals experiencing rectal/anal discomfort to evaluate for common lower gastrointestinal pathology which can cause pain such as anal fissures, sexually transmitted infection, anal condylomata, or bleeding such as internal hemorrhoids, rectal ulceration/inflammation, rectal varices or trauma. Anoscopy can be useful in evaluating for anal cancer, particularly in high-risk groups such as in men who have sex with men and have co-existing HIV infection. This translates to a lifetime risk of 7% to 8% in a male infected in his 20s. There are no current routine screening guidelines at this time. [5][6][7][8].

Anoscopy will help visualize the anus, the anal canal, and the internal sphincter, it is usually used when the digital rectal examination is inconclusive.

The following summarizes the indications for anoscopy

- Initial evaluation of rectal bleeding (hemorrhoids, proctitis, neoplasm)
- To obtain cytology samples to screen for anal squamous lesions, particularly in high-risk patients with HIV infection)
- Evaluation of intra-anal condyloma
- Anal/perianal pain (thrombosed hemorrhoids, fissures)
- Anal fistula
- Evaluation of anal trauma
- Mass palpated on DRE
- Perianal itching
- Abdominal pain
- Change in bowel habit
- Anal discharge/prolapse
- Retrieval of foreign body
- Evaluation of fecal impaction
- Treatment of prolapsing hemorrhoids by rubber band ligation (using a slotted anoscope)

Contraindications

Contraindications include patient inability to tolerate the examination due to discomfort, apprehension, significant active bleeding which could prevent adequate visualization by the examiner, or the presence of a known mass in the distal rectum which could be damaged or irritated by the introduction of the rigid anoscope.

Anoscopy should not be performed on an imperforate anus.

Equipment

The equipment needed for the procedure are:

- Lubricating jelly or lidocaine jelly
- Sterile or nonsterile gloves
- Paper towels or tissue paper
- Disposable sheet
- Light source (if not already built into the anoscope)
- Anoscope

The risks, benefits, and alternatives of the procedure should be discussed with the patient before initiation of anoscopy. The patient should be counseled regarding the expectation of some discomfort during the examination

Anoscopes come in the slotted and non-slotted variety, both with an obturator or occlusion device which is left in place during insertion. Both devices are then gradually removed with the obturator removed, enabling visualization. The non-slotted variety has the benefit of allowing 360-degree visualization of the entire anal passage versus the slotted version which provides a view of only a small portion of the distal rectum and anal opening at a time. As a consequence, the slotted version may require several passes to provide complete visualization if the patient is unable to tolerate the rotation of the device. Most commercially available anoscopes do not include a built-in light source, leaving providers to use either a head-mounted light source or to enlist an assistant in directing the light source to allow adequate visualization. High-resolution anoscopy is a specialized procedure involving camera-assisted magnification and is typically considered to be out of the scope of practice of practitioners who have not received specialized training in its use.

Preparation

Patient Preparation

Anesthesia

Topical anesthesia is administered, with 2% lidocaine jelly inserted into the anal canal at least 10 minutes before insertion of the anoscope. If necessary, intravenous (IV) medications such as opiates (eg, morphine sulfate) or benzodiazepines (eg, lorazepam, diazepam, midazolam) may be administered for analgesia and light sedation. In some situations, it may be reasonable to consider IV sedation with agents such as fentanyl, midazolam, propofol, ketamine, or etomidate.

Positioning

- The patient can be placed in multiple positions to facilitate the procedure. The most commonly adopted position is the lateral decubitus position with the contralateral leg flexed at the knee and the hip. The patient can also be placed in the knee-shoulder position or the prone position.

Technique

Typically, the examiner will perform a digital rectal exam first to ensure that no mass or tissue is obstructing the anal canal which could be injured during the insertion of the device. There is insufficient evidence to comment on the efficacy of topical pre-procedure lidocaine application to provide analgesia during anoscopy, but in the absence of known lidocaine allergy, many practitioners consider this a reasonable measure to adopt. The water-soluble lubricant is applied to the anoscope itself pre-insertion to facilitate insertion. This may be accomplished using the topical anesthetic as a de-facto lubricant, thereby providing an opportunity for the lidocaine to be distributed along the path of the anoscope before its introduction. Typically, the device is introduced with the obturator in place which is then removed, allowing the examiner to visualize the anal canal and distal rectum as the anoscope is slowly withdrawn. In the case of slotted anoscopes, which only allow visualization of a portion of the mucosa at the time, the obturator should be reinserted before reinserting or rotating the device due to the discomfort associated with placing traction of the segment of tissue which bulges into the slotted segment.

Complications

- Discomfort post examination
- Tearing of the perianal skin or mucosa
- Abrasion or tearing of hemorrhoidal tissue
- Infection post-procedure is possible, but very rarely occurs

Discomfort and abrasion can be prevented by the adequate use of lubricants.Infection is a very rare complication, prophylactic antibiotics can be considered in certain high-risk populations. Be cautions in patients with a history of anal surgery or anal fissures[9]

Clinical Significance

While anoscopy appears to be the superior procedure for identifying distal anorectal pathologies[10] such as internal hemorrhoids, proctitis, or ulcerations (which cannot be reliably identified or differentiated from one another on a digital rectal exam) which may lead patients to present with complaints of bleeding or discomfort, there are significant limitations to this procedure. While anoscopy is highly sensitive for identifying pathology such as internal hemorrhoids, findings seen on anoscopy do not allow practitioners to rule out a proximal source of GI bleeding, which is identified subsequently on endoscopy up to 50% of the time. Therefore, the finding of a potential source of GI bleeding such as internal hemorrhoids in isolation does not allow the examiner to exclude an additional source of bleeding.

Ultimately, anoscopy is a useful adjunct for screening for anorectal pathology which is inexpensive and can be accomplished quickly and without preparation. However, the procedure must not be unduly relied upon in the evaluation of a patient with rectal bleeding, since the presence of rectal pathology does not rule out a proximal source of bleeding.

Enhancing Healthcare Team Outcomes

Healthcare workers including nurse practitioners and primary care providers should be familiar with anoscopy. This bedside procedure is inexpensive, can be performed quickly without bowel preparation or the need for sedation. With this method, the examiner can visualize the internal portions of the anal sphincter and the distal rectum. Prospective studies suggest that anoscopy has a higher sensitivity for anorectal lesions such as internal hemorrhoids, proctitis, lacerations, fistulas, ulcers, and masses than a flexible sigmoidoscopy. Up to 50% of rectal bleeding can be falsely attributed to hemorrhoids without internal examination to confirm this diagnosis. However, it is also important to know the limitations of anoscopy and whenever there is a doubt about the diagnosis, the patient should be referred to the gastroenterologist or general surgeon for further workup.

Continuing Education / Review Questions

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