Minor Office Procedures

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ABSTRACT

Office procedures are an important part of colon and rectal surgery. Patients often present with urgent conditions that can be handled quickly and easily in the office setting. On the other hand, the surgeon must make an accurate assessment regarding which situations are appropriate to manage in the office and which are not. To avoid complications, the office must be equipped with staff familiar with the procedures and instruments/supplies to perform the procedure. The surgeon must also establish a rapport with patients to facilitate completion of each procedure with minimal patient, surgeon, and staff anxiety. With thoughtful preparation one can accomplish many procedures in the office effectively and safely.

KEYWORDS: Doctor-patient relationship, judgment, office procedures

Objectives: On completion of this article, the reader should be able to: (1) summarize important factors associated with successful management of patients undergoing office procedures; (2) know what equipment is necessary to have an office prepared to perform minor procedures; and (3) have an understanding of which procedures are to be performed in various settings, depending on the office capability and patient comfort.

To successfully accomplish office procedures a trusting initial doctor/patient relationship must be established relatively quickly. Furthermore, one's office must be fully outfitted to allow these minor procedures to be accomplished with ease and precision.¹ Equally important is determining which procedures are appropriately managed in the office versus the operating room (OR) or a minor surgery center. These decisions will vary based on the abilities of the surgeon and the capabilities of each office and its staff. It must be kept in mind that most colon and rectal office examination rooms have limited lighting and supplies thus hindering the ability to manage complications. Also, most offices are not equipped to administer sedation with effective patient monitoring, although crash carts should be stocked in each office. These concerns are especially important in deciding which procedures can be done in the office versus those that should be taken to the OR. Some

procedures can almost always be done in the office while others are done under sedation in the OR, depending on the level of patient anxiety. Finally, some procedures are limited only to the OR due to the potential for complications and the expected level of patient discomfort (Table 1).

Though the office cannot be as complete as the OR regarding equipment and supplies, there are some minimum necessary components that each office must have to complete minor colorectal procedures. The colorectal office must have a full supply of adult and pediatric anosopes, proctoscopes (rigid and flexible), and retractors. At least one motorized examining table and a positional light is necessary. The office must have a minor surgical tray of instruments for cutting, grasping, holding, and so on. Biopsy instruments, cautery, and suction capability are a must. Chemical agents are necessary to deal with growths (e.g., podophyllin,

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Table 1 Office Procedures

Always Done in Office	Sometimes Done in OR	Always Done in OR
Anoscopy	Rigid proctoscopy	Hemorrhoidectomy
Banding hemorrhoids	Thrombosed hemorrhoid excision	Excision/fulguration multiple condyloma
Infrared coagulation of hemorrhoids	Excision/fulguration single condyloma	I&D perirectal abscess
Topical condyloma treatment	I&D of superficial anal abscess	Multiple skin tag excision
Suture removal	Single skin tag/papilla excision	Transanal rectal tumor excision
Drain removal	Incisional biopsy anal tumor	
	Seton removal	
	Lateral internal anal sphincterotomy (LIAS)	
	Snare excision or fulguration of polyps	
	Injection of Botox	

OR, operating room; I&D, incision and drainage.

trichloroacetic acid [TCA]), bleeding (e.g., formalin), and inflamed tissues (e.g., karaya powder). Beyond these items, other more specific tools are left up to the surgeon. Having appropriate supplies and equipment available, the next step is determining that the patient is an appropriate candidate for, and willing to undergo, the procedure. The initial encounter allows the surgeon to assess if the patient will tolerate a procedure while fully awake and aware. It also allows the patient to build trust in the surgeon while developing a willingness to endure the inherent anxiety and vulnerability created during fully conscious procedures. This is important since any procedure done in the office can also be done in the OR or ambulatory surgical center. Patients can often present in need of urgent intervention, and one must not hastily manage the problem without first gaining the patients' respect and obtaining pertinent information that may altogether alter their management. Furthermore, patients often feel more confident in surgeons who discuss alternatives such as surgery versus observation or office versus OR management. Obtaining a concise history (related symptoms, allergies, bleeding tendencies, pain tolerance, medical risks, etc.) accomplishes both goals and prevents a surgeon from proceeding directly to excise a "thrombosed hemorrhoid" but then encountering a deep post anal-space abscess. These simple things help establish rapport, which decreases patient anxiety and ultimately facilitates completion of office procedures in a more comfortable fashion. Most importantly, a informed consent is obtained prior to beginning any procedure. Procedures with potential for significant risks or complications are best documented with a written consent.

SPECIFIC PROCEDURES

Thrombosed Hemorrhoids

The patient is positioned in the prone jackknife position or left lateral position on a Ritter or similar motorized

table.² Infiltration of local anesthetic is accomplished using a mixture of 0.5% lidocaine (Xylocaine 2 cc), 0.5% bupivacaine (Marcaine 3 cc) and sodium bicarbonate (1 cc). Both lidocaine and bupivacaine are amide compounds that have little allergic potential. An epinephrine-containing mixture is preferred to offset the dilating properties of these anesthetics and slow absorption. This maximizes local effectiveness (less bleeding with prolonged analgesia) while minimizing potential toxicity. Bicarbonate neutralizes the anesthetic's acidity (less stinging). Lidocaine has a short onset and duration providing a quicker onset of numbness while the Marcaine gives the patient a few hours of relief. The injection is accomplished slowly using only 1 to 2 cc initially with a 27- to 30-gauge needle inserted into the base of the hemorrhoid. Producing a wheal in the dermis is unnecessarily painful. The site is gently massaged for 5 to 10 seconds and then the remainder of the anesthetic is infiltrated. Injecting small amounts frequently but slowly minimizes the pain and allows the anesthetic to begin to take effect before the incision is made, making the procedure less traumatic for patient and staff. Great confidence is gained by patients in their doctor when they unexpectedly feel very little pain after the first 20 to 30 seconds. The incision site should be free of obvious stool or contaminated K-Y gel. The doctor makes an incision at the apex of the bulging anoderm with Metzenbaum scissors or scalpel and then dissects the base of the hemorrhoid while attempting to avoid bursting the clot. This makes for a cleaner view of any remaining clots and prevents dissecting in a field obscured by blood. Once the clot has been removed, anoscopy is performed to be certain that there are no other problems that must be addressed. Finding no other pathology, a pressure dressing is placed over the open wound and occasionally the buttocks are taped closed. Options include Betadine or alcohol skin preparation, and cautery. In patients not on anticoagulants, local pressure and the injected epinephrine will handle almost

all bleeding. Patients are given written instructions on wound management, wound healing, expected pain level, dietary considerations, and follow-up. Patients should keep the wound clean with a moist wipe and perform sitz baths at least daily for cleansing and as needed for comfort. Daily dietary intake of at least 25 g of fiber, including a fiber supplement, and 80 ounces of noncaffeinated beverage help patients avoid constipation. Patients receive a prescription for narcotic pain medicine but are instructed to use this only if Tylenol or ibuprofen is ineffective. They return in 2 to 3 weeks for wound evaluation and to determine if any other issues must be addressed. These postprocedure instructions are uniform for most procedures that require a perianal incision.

Incision and Drainage (I&D) of Abscess

An initial assessment is made as to whether this procedure can be accomplished in the office or if the OR would be better. Relative indicators of need for managing in the OR are overanxious patient, large abscess with cellulitis, deep post anal abscess, dehydrated or septic-appearing patient, patient preference, immunocompromised patient (HIV, diabetes, etc), or other high-risk patients. Assuming the procedure is suitable for the office, suction is set up and gauze or towels are placed around the area to contain any spillage. Patients are usually placed in the prone jack-knife position, although a left lateral position can be used if the patient feels uncomfortable or too "vulnerable" in prone jack-knife. Adhesive tape is often helpful to distract the buttocks and enhance exposure. A local anesthetic is again infiltrated with the caveat that abscesses are notoriously difficult to anesthetize. Injection is begun dermally this time, as deeper injections tend to enter the abscess cavity, expand it, and actually increase pain. Once the anesthetic has taken effect, an elliptical or cruciate incision is made of a size large enough to allow insertion of a hemostat. The incision is made as close to the anal verge as possible in case there is an associated fistula that develops later. The cavity is fully decompressed and then probed gently with the hemostat to determine in which direction it tracks and if there are any loculations. Finally, the wound is irrigated with a mixture of 7 parts warm water and 3 parts bicarbonate (though water alone is probably adequate). This admixture enters areas that might not have been reached while probing the abscess cavity with the hemostat. Any remaining infection is therefore diluted and flushed out. Once all of the irrigant is evacuated with compression and/or suction, dry gauze is gently packed into the wound. If there is concern about bleeding, the wound is packed more tightly. The patient is instructed to remove the gauze later that evening while sitting in a warm bath with no need to repack. Oral antibiotics are only used if there is cellulitis.

The patient should return in 7 to 10 days for re-evaluation of the wound.

CATHETER DRAINAGE

An alternative method of treatment for selected patients is catheter drainage.³ Patients suitable for this technique should not have severe sepsis or any serious systemic illness.⁴ The patient is placed in either the prone jack-knife or left lateral (Sims') position. The skin is prepared with a povidone-iodine solution and the fluctuant point of the abscess is determined. A local anesthetic of 0.5% lidocaine and 1:200,000 epinephrine is injected into the surrounding area, and a stab incision is made to drain the pus. A 10- to 16-Fr soft latex mushroom catheter is inserted over a probe into the abscess cavity. When it is released, the shape of the catheter tip holds the catheter in place, thus obviating the need for sutures. The external portion of the catheter is shortened to leave 2 to 3 cm outside the skin when the tip is in the depths of the abscess cavity. This reduces the chances of the catheter falling out of or into the cavity. A small bandage is placed over the catheter. Antibiotics are unnecessary, and analgesics are prescribed.

The patient is instructed to keep the area clean and to return within 7 to 10 days. If at this visit the cavity has closed around the catheter and the drainage has ceased, the catheter may be removed. Sigmoidoscopy and anoscopy should be performed to exclude an associated fistula. Patients found to have fistulas should be scheduled for elective fistulotomy. If the abscess cavity has not healed, the catheter should be left in place or it should be replaced with a smaller catheter. The patient should be followed until healing has occurred.

Several parts of this technique deserve further comment. First, the stab incision should be placed as close as possible to the anus, minimizing the amount of tissue that must be opened if a fistula is found once the inflammation subsides. Second, the size and length of the catheter should correspond to the size of the abscess cavity. A catheter that is too small or too short may fall into the wound. If the patient waits too long for a follow-up visit, the skin may seal and a second incision will be required to retrieve the catheter, or the abscess may recur. Third, the length of time that the catheter should be left in place requires clinical judgment; factors involved in the decision include the size of the original abscess cavity, the amount of granulation tissue around the catheter, and the character and amount of drainage. If there is doubt, it is better to leave the catheter in place for an additional period of time. Alternatively, a contrast study through the catheter may be obtained. The catheter should remain in place until the cavity has closed down around the catheter. Finally, follow-up care is very important. An adequate physical examination, including sigmoidoscopy, is essential once the inflammation has

resolved to rule out an associated fistula or other disease process.

Excision of Skin Tags

This procedure requires set-up of cautery and suction, as there may be superficial arterial bleeding depending on size of the tags. For this reason, this is one of the few office procedures where I suture the wound closed (running 3-0 vicryl), although topical agents such as silver nitrate may be used as well. One must get an idea of how much skin must be excised prior to infiltrating the anesthetic, as this will be distorted and enlarged when the skin is infiltrated. Taking too much skin invites future stitch pull-through and patient angst. In contrast, taking too little skin leaves the patient with a skin tag, though smaller, which will often make patients doubt the surgeon's credibility. With this in mind, it is usually best to begin the incision within the borders of the skin tag after infiltration. Once the subdermal injection of a local anesthetic takes effect, the tag is grasped with a toothed forceps and excised with a 15-blade scalpel, beveling the incision slightly inward so more of the central portion is removed. When the skin edges are closed, they can then lie more flat without a central bulge. The cautery is initially set on 25 watts cut and coagulation current, though this depends on the device used. For hemostasis, cautery is used in pulses rather than with sustained application. With prolonged cautery, heat build-up occurs rapidly, making it rather difficult to recognize adequate analgesia. For this reason, I use a scalpel to excise the tag initially. Manual pressure immediately after skin tag excision will usually obviate the need for excessive use of cautery. A pressure dressing is again useful to prevent prolonged bleeding or hematoma formation. These patients return in 2 to 3 weeks for wound re-evaluation.

Treatment of Anal Condyloma

Depending on patient comfort, extent of disease, and whether this is an initial presentation or recurrent disease, these patients may be managed in the OR. OR management is preferred for initial presentations to obtain a good baseline examination with the patient completely relaxed and comfortable. Certainly if there are only two or three small (≤ 4 mm) external warts these can be managed topically and patients should be encouraged to have these taken care of in the office. If there are internal (i.e., involving the dentate line or higher) and external warts, a trip to the OR is usually necessary. Also, any patient that is extremely apprehensive about in-office management should be taken to the OR. Office treatment options consist of simple topical agents, freezing, or excision and fulguration. Topical agents of choice are podophyllin (external only) and TCA (internal and

external). The larger and more extensive the condyloma, the less effective are topical treatments for long-lasting results. In these cases excision and fulguration are more effective. When the condylomata are pedunculated or on a skin tag, excision can proceed in the fashion described above. For external, sessile warts, the tissue directly beneath the wart is anesthetized, elevating the wart above the adjacent skin. It can then be excised without sacrificing adjacent anoderm using Metzenbaum scissors and fine-toothed forceps. The base of these lesions is always fulgurated to destroy any virus harbored in this region. Office treatment of internal warts begins with infiltration of 1 to 2 cc local just above the dentate line. This can be accomplished with a long spinal needle through an anoscope. Sessile internal warts are best fulgurated. Smoke evacuation with suction is required to avoid inhalation of aerosolized virus, and the doctor and any assistants should also use surgical masks with appropriate filtration. The majority of patients are selected so that complete removal is possible in one visit. If needed, management in two stages can be accomplished by providing about a 1-month interval before removal of the remaining warts.

Anal Fissure Management

Occasionally, one is faced with the patient who either cannot or will not consent (usually for time or monetary constraints) to minor surgery in the OR. A sphincterotomy can be performed in the office setting in a motivated patient who refuses to go to the OR. The patient is placed in the prone jack-knife position with the buttocks spread laterally either with tape or via the assistant. The intersphincteric groove on the right side is gently palpated (avoiding the left lateral hemorrhoid) and then anesthetized. Cautery is used as needed during the procedure to ensure adequate hemostasis. Because of the limited ability to ensure adequate analgesia with the use of extensive cautery, it is paramount that the sphincter muscle be carefully dissected out so that precise electrocautery sphincter division can be performed. Dissection is best performed with a curved hemostat. The muscle is separated from the overlying anoderm and the underlying external sphincter. The muscle is then divided up to the dentate line. Some use the guideline that the sphincterotomy should be the length of the fissure. Again, wound closure is unnecessary. A semiclosed technique can also be performed in a similar fashion using a #15 scalpel blade, Beaver blade, or fine scissors. However, this usually requires placing a Hill-Ferguson retractor in the anus to stretch the internal sphincter and identify the intersphincteric groove. This may require additional local anesthetic. If a short fistula tract is noted beneath the fissure, a simple fistulotomy can be performed at the same time. Also, larger skin tags may be excised.

However, minimal manipulation of the fissure itself is recommended.

Internal Hemorrhoids

Office management of internal hemorrhoids generally consists of sclerotherapy, ligation, or infrared coagulation (IRC). Hemorrhoid banding is indicated for patients with rectal bleeding or prolapsing, nonthrombosed internal hemorrhoids that do not respond to conservative measures (i.e., fiber supplements, sitz baths, and suppositories). No anesthetic is required. The author usually bands a maximum of two hemorrhoids in the initial intervention and then, if necessary, the third on a return visit 3 to 4 weeks later, unless the patient insists on having them all done at one visit. The author also prefers to band using an assistant as opposed to single operator banding. Most single operator banding devices provide a more limited view of the anal canal and the hemorrhoids as they are drawn into the device. Because of this, these devices afford less control in assuring that an adequate amount of hemorrhoidal tissue is included in the bands. The Pennington or Fansler-Ives anoscope is inserted into the anal canal. The assistant secures the anoscope while the surgeon inserts the McGivney ligator and then grasps the largest hemorrhoid with a clamp through the drum of the ligator. The hemorrhoid is then pulled through the drum of the ligator, which likewise is advanced to the base of the hemorrhoid. At this point the amount of discomfort for the patient is assessed. If the patient is very uncomfortable a more proximal grasp of the hemorrhoid is performed. It is often very difficult to remove an improperly placed band without significant bleeding and therefore easier to simply place it in the appropriate position initially. When it is clear that the patient is comfortable, the bands are applied by squeezing the trigger, which releases two bands around the base of the internal hemorrhoid. Some surgeons inject the hemorrhoid with local anesthetic prior to ligation to make the surrounding tissue swell and thus become easier to incorporate into the ligator. The author avoids this since this may give the patient analgesia while the area is being manipulated only to give way to excruciating pain while driving home because of a band placed on the anoderm. Patients may note anal discomfort that gives the sensation of the urge to defecate. This usually resolves after 1 to 2 days. Patients should be warned to notify the office if they develop increasing pain, fever, scrotal swelling, and urinary retention. These symptoms may herald a necrotizing infection, a rare complication of this procedure. Other complications that should be discussed prior to performing the procedure are delayed hemorrhage that may occur up to 2 weeks after the procedure and external hemorrhoid thrombosis.

Sclerotherapy is an alternative to banding for internal hemorrhoids. It is not indicated for external

hemorrhoids. Likewise, thrombosed or inflamed hemorrhoids should not be injected. Sclerosis is ideal for small, nonprolapsing internal hemorrhoids that are bleeding. Again no local anesthetic is needed. With the patient in the prone jack-knife position, the anoscope is inserted into the anal canal. A long 21-gauge spinal needle may be used for injection, though an angled needle allows easier infiltration of the sclerosant. A 3-cc syringe is filled with one of several sclerosing agents (5% phenol, sodium morrhuate, quinine, sotradecol[®] [sodium tetrodecyl sulfate]), which is injected into the submucosa forming a wheal at the apex of the hemorrhoid. Only 0.5 to 1 cc is usually needed for each injection (3 cc max). It is important to see the wheal formed indicating that the injection is in the proper plane. The overlying mucosa will often necrose if the injection is too superficial. If injected too deeply, no wheal is formed. The major advantage of sclerosis is that all hemorrhoids may be treated in one visit. The treatment may need to be repeated but one should allow at least 3 weeks between treatments to avoid complications like mucosal sloughing or severe burning discomfort.

Infrared Photocoagulation (IRC)

Another technique to treat internal hemorrhoids is photocoagulation.⁵ An IRC delivers a controlled amount of infrared energy.⁶ An anoscope is used to identify the hemorrhoidal tissue. Several applications of energy are delivered at the superior portion of the hemorrhoid bundle. The physics of the energy are such that the majority of energy is deposited into the submucosa. This results in a small mucosal ulcer, which causes fixation after healing.⁷ The IRC works best on patients with small bleeding hemorrhoids. Two to three bundles are treated at each session.

An advantage of this technique is that maximal discomfort occurs at the time of IRC treatment and not at a later time, as is seen with incorrectly placed bands. Disadvantages of this technique are that the cost of the instrument is significantly higher than a bander and that this method is less effective in eliminating bulky hemorrhoids.⁸

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