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Comprehensive Nursing Care and Clinical Management of Patients Undergoing Hemorrhoidectomy Across the Preoperative Intraoperative and Postoperative Phases

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Abstract

Background: Hemorrhoidal disease is one of the most common anorectal disorders encountered in clinical practice, with surgical intervention required in a subset of patients with advanced or refractory disease. Hemorrhoidectomy remains the definitive treatment for grade III and IV hemorrhoids; however, optimal patient outcomes depend heavily on comprehensive perioperative nursing care and interprofessional collaboration.

Aim: This article aims to describe evidence-based nursing care and clinical management strategies for patients undergoing hemorrhoidectomy across the preoperative, intraoperative, and postoperative phases.

Methods: A narrative review of current clinical guidelines, randomized controlled trials, and meta-analyses was conducted to evaluate surgical techniques, perioperative preparation, complication management, and nursing interventions related to hemorrhoidectomy. Emphasis was placed on multimodal pain management and interprofessional roles.

Results: Surgical hemorrhoidectomy, particularly closed techniques, demonstrated high efficacy with low recurrence rates. Effective nursing interventions, including patient education, pain assessment, wound care, and bowel management, significantly reduced complications such as bleeding, urinary retention, and anal stenosis. Multimodal analgesia improved postoperative comfort and recovery.

Conclusion: Comprehensive nursing care combined with coordinated interprofessional management plays a critical role in optimizing patient safety, reducing complications, and enhancing recovery following hemorrhoidectomy.

Key words: Hemorrhoidectomy, Nursing care, Postoperative management, Multimodal analgesia, Interprofessional collaboration.

Introduction

Hemorrhoidal disease represents one of the most frequently encountered anorectal conditions in clinical practice, with surgical management required in nearly one tenth of affected patients [1]. Determining its true prevalence remains challenging, as individuals without symptoms rarely seek medical evaluation. Epidemiological data indicate that approximately 4.4 percent of the population in the United States experience symptomatic hemorrhoids, with the highest burden observed among adults aged between 45 and 65 years [2][3][4]. Hemorrhoids are normal anatomical structures located within the anal submucosa and consist of vascular cushions composed of connective tissue, smooth muscle, and blood vessels. These cushions play a vital physiological role by contributing to continence mechanisms and maintaining anal canal closure. Pathophysiological explanations for hemorrhoidal disease remain incomplete. Earlier hypotheses proposed that hemorrhoids arise from varicosities of the anal veins; however, this theory lacks strong

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empirical support. Contemporary evidence favors the concept that hemorrhoidal disease results primarily from degeneration, weakening, or displacement of the normal vascular cushions, rather than venous dilation alone [5]. See Image. Hemorrhoidal and Middle Sacral Veins. Anatomically, three principal hemorrhoidal columns are consistently identified within the anal canal, located at the left lateral, right anterolateral, and right posterolateral positions. Hemorrhoids are classified as internal or external based on their anatomical relationship to the dentate line [3]. Internal hemorrhoids originate above the dentate line and are further categorized into grades I through IV according to the extent of prolapse, a classification system that directly influences therapeutic decision-making [2]. Clinical presentation varies according to hemorrhoid type and severity. Patients with symptomatic internal hemorrhoids most commonly report painless, bright red rectal bleeding, often noticed as streaks on the stool or toilet paper. Additional complaints may include anal pruritus, discomfort, mucosal prolapse resembling grape-like tissue, or a combination of these manifestations. In contrast, external hemorrhoids are frequently asymptomatic due to their location; however, when thrombosis occurs, patients may experience severe pain attributable to somatic nerve innervation in the perianal region [2][4].

Accurate diagnosis relies on a thorough history and targeted physical examination, with careful attention to symptom duration, severity, and associated risk factors such as constipation, prolonged straining, or sedentary behavior. Management strategies for hemorrhoidal disease are determined by hemorrhoid location, degree of prolapse, and response to prior therapies. Both conservative and surgical interventions play essential roles across the disease spectrum [6]. Initial treatment typically emphasizes nonoperative measures, with dietary modification forming the cornerstone of conservative management. Increased fiber intake remains the most consistently recommended intervention. Garg suggests the addition of four to five teaspoons of fiber daily, equivalent to approximately 20 to 25 grams of supplemental fiber. Adequate hydration is essential for therapeutic efficacy, with at least 500 milliliters of water required concurrently to prevent abdominal discomfort and promote stool softening. Evidence demonstrates that this approach can halt disease progression and reduce prolapse severity in many patients [7]. For patients with grade I or II internal hemorrhoids who do not respond sufficiently to medical therapy, office-based procedures are considered appropriate next-line options. Rubber band ligation and infrared coagulation are among the most commonly employed modalities in this setting [8]. Rubber band ligation typically requires one session, with some cases necessitating a second application, separated by an interval of approximately four weeks [9]. Comparative analyses reveal that rubber band ligation offers superior long-term efficacy, while infrared coagulation is associated with reduced procedural pain, likely due to the absence of mucosal fixation during treatment. Notably, the failure rate of rubber band ligation is reported to be four times lower than that observed with infrared coagulation, underscoring its durability as a therapeutic option [2].

Definitive surgical intervention is reserved for patients with recurrent symptoms or advanced disease, particularly those with grade III or IV hemorrhoids that significantly impair quality of life. Surgical excision remains the most effective treatment in such cases. The two principal operative techniques include the closed hemorrhoidectomy, commonly referred to as the Ferguson procedure, which predominates in the United States, and the open hemorrhoidectomy, also known as the Milligan–Morgan technique, which is widely practiced in the United Kingdom and Europe [2][4]. These procedures aim to remove diseased hemorrhoidal tissue while minimizing postoperative complications and preserving anal function, thereby offering sustained symptom relief in appropriately selected patients.

Anatomy and Physiology

Hemorrhoids are specialized vascular cushions that form a normal component of the anal canal and are not inherently pathological. These structures consist of arteriovenous channels supported by connective tissue and smooth muscle fibers that contribute to anal continence and closure pressure. At the microscopic level, hemorrhoidal tissue is composed of sinusoidal spaces rather than true veins, as these channels lack a muscular wall [3]. The presence of direct arteriovenous communications within these cushions explains the characteristic appearance of hemorrhoidal bleeding, which is typically bright red and closely resembles arterial blood in both color and pH [5][10]. This vascular configuration distinguishes hemorrhoidal bleeding from other sources of lower gastrointestinal hemorrhage and has important diagnostic implications in clinical practice. The adult anal canal measures approximately four centimeters in length and is anatomically divided by the dentate line, a key landmark that separates regions with distinct embryologic origin, epithelial lining, and nerve supply. Internal hemorrhoids arise above the dentate line and are innervated by visceral afferent fibers, which accounts for their generally painless nature. These hemorrhoids are covered by columnar epithelium similar to that of the rectum and are classified according to the extent of mucosal prolapse. In early disease, grade I internal hemorrhoids present as dilated vascular cushions without prolapse. Progression to grade II is characterized by prolapse during increased intra-abdominal pressure, such as straining or the Valsalva maneuver, with spontaneous reduction thereafter.

Grade III hemorrhoids prolapse in a similar manner but require manual repositioning, reflecting increased tissue laxity and loss of supportive structures. Grade IV hemorrhoids represent advanced disease, with persistent prolapse that cannot be manually reduced and is often associated with edema, inflammation, or thrombosis [8].

External hemorrhoids originate below the dentate line and are covered by anoderm, a modified squamous epithelium that is richly supplied with somatic sensory nerves. This innervation renders external hemorrhoids highly sensitive to tactile stimuli, stretching, and temperature changes, explaining the significant pain experienced when thrombosis or inflammation occurs [3]. The anatomical and neurological distinctions between internal and external hemorrhoids are fundamental to understanding symptom patterns, physical findings, and patient-reported discomfort. The established grading system for hemorrhoids provides a standardized framework for correlating physical examination findings with disease severity and guides clinical decision-making [2]. By integrating anatomical location, degree of prolapse, and sensory innervation, this classification supports appropriate selection of conservative, procedural, or surgical management strategies and remains central to both diagnostic assessment and therapeutic planning in hemorrhoidal disease.

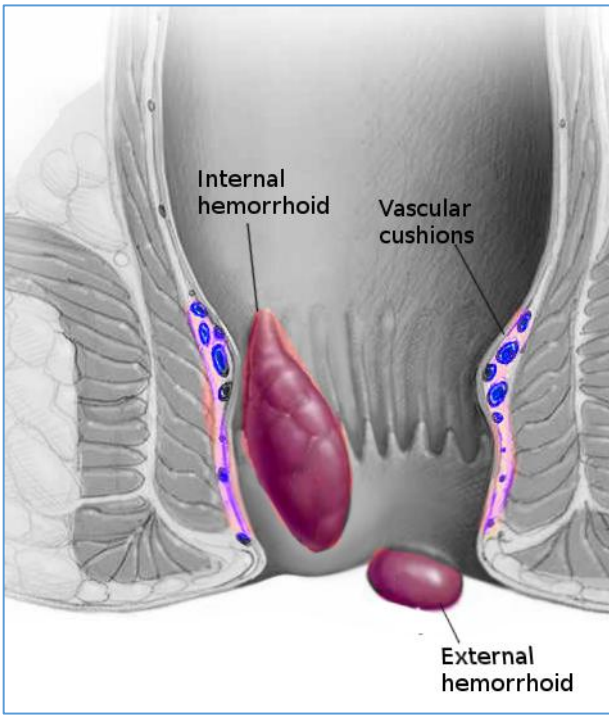

Fig. 1: Hemorrhoids.

Indications

Operative hemorrhoidectomy is reserved for patients with advanced hemorrhoidal disease in whom conservative or minimally invasive approaches fail to achieve adequate symptom control. It is most commonly indicated for individuals with large third- and fourth-degree hemorrhoids, particularly when nonoperative management has proven ineffective or poorly tolerated. In such cases, the severity of prolapse and structural deterioration of the hemorrhoidal cushions significantly reduces the likelihood of meaningful response to dietary modification, pharmacologic therapy, or office-based interventions. Surgical management is also warranted when the disease process has progressed to a stage at which conservative measures are unlikely to provide durable relief, necessitating definitive excision to restore anorectal function and improve quality of life. Patients presenting with mixed hemorrhoids, characterized by a prominent external component associated with internal prolapse, represent a distinct subgroup for whom operative intervention is strongly favored. The coexistence of internal and external disease often results in persistent symptoms such as discomfort, hygiene difficulties, and prolapse that cannot be adequately addressed through nonoperative techniques. Similarly, incarcerated internal hemorrhoids constitute an urgent indication for surgical treatment, as persistent prolapse may compromise venous drainage, increase edema, and predispose to thrombosis or ischemic changes. Prompt hemorrhoidectomy in these situations aims to alleviate symptoms, prevent complications, and reduce the risk of recurrent incarceration [6].

Hemorrhoidectomy is also indicated in patients with coagulopathies who experience significant hemorrhoidal bleeding. In this population, ongoing bleeding poses a heightened clinical risk, and definitive surgical management may be required to achieve hemostasis when conservative strategies are insufficient. Additionally, individuals with symptomatic external hemorrhoids or combined internal and external hemorrhoidal disease accompanied by prolapse are frequently advised to undergo surgical excision. This recommendation is supported by high-quality evidence demonstrating superior symptom resolution and lower recurrence rates compared with nonoperative approaches in appropriately selected patients. For patients who fail to respond to or cannot tolerate office-based procedures such as rubber-band ligation, sclerotherapy, or infrared coagulation, operative hemorrhoidectomy remains the treatment of choice. While these minimally invasive techniques are effective in early-stage disease, their efficacy diminishes as hemorrhoids progress in size and severity. Surgical hemorrhoidectomy is particularly indicated in cases of grade III or IV hemorrhoids and in the presence of significant skin tags, where it continues to be regarded as an exceptionally effective therapeutic option. Evidence from a meta-analysis of eighteen randomized prospective studies comparing hemorrhoidectomy with office-based procedures demonstrated that surgical excision provides the highest efficacy for patients with grade III

hemorrhoids, underscoring its role as the definitive intervention in advanced disease [6].

Contraindications

Hemorrhoidectomy is not appropriate for all patients, and careful assessment is required to identify conditions that may increase operative risk or compromise postoperative outcomes. Several factors are considered relative contraindications rather than absolute exclusions, as the decision to proceed with surgery must balance potential benefits against anticipated risks. Patients who cannot safely tolerate general anesthesia due to significant medical comorbidities, such as advanced cardiopulmonary disease, may face unacceptable perioperative risk, making alternative management strategies more appropriate. Baseline fecal incontinence represents another important consideration, as surgical intervention may further impair sphincter function and worsen continence outcomes. Similarly, the presence of a rectocele may contribute to anorectal symptoms that are not primarily hemorrhoidal in origin, limiting the expected benefit of hemorrhoidectomy. Inflammatory bowel diseases, including Crohn disease and ulcerative colitis, are associated with impaired wound healing and a higher risk of postoperative complications, rendering surgical excision less favorable in these patients. Portal hypertension accompanied by rectal varices increases the risk of significant intraoperative and postoperative bleeding. Uncontrolled bleeding disorders also pose substantial hemorrhagic risk and require stabilization before any surgical intervention is considered [6].

Equipment

Excisional hemorrhoidectomy relies primarily on standard surgical instruments designed to allow precise tissue dissection and effective hemostasis. The scalpel remains the fundamental instrument for hemorrhoidal excision and may be used alone or in combination with surgical scissors to facilitate controlled dissection. In recent years, advanced energy-based devices have been introduced into surgical practice, including Ligasure and the Harmonic scalpel. Ligasure functions as a bipolar cautery system that enables simultaneous tissue division and vessel coagulation, while the Harmonic scalpel employs ultrasonic vibration through a reciprocating blade to achieve cutting and coagulation via generated heat. Despite their technological advantages, current evidence indicates that these energy devices do not offer substantial clinical benefits when weighed against their higher cost [3]. Monopolar electrocautery is frequently utilized because it provides effective hemostasis compared with cold scalpel techniques, although its use may result in collateral tissue injury due to lateral thermal spread. Adequate visualization of the hemorrhoidal complex is achieved using a Hill Ferguson retractor. Additional essential instruments include DeBakey forceps, Mayo scissors, large Kelly clamps, and absorbable sutures to support tissue handling and wound closure [3].

Personnel

Successful performance of a hemorrhoidectomy requires a coordinated multidisciplinary surgical team to ensure patient safety and procedural efficiency. The operating surgeon assumes primary responsibility for patient assessment, operative planning, and execution of the procedure, including identification and excision of the hemorrhoidal tissue while preserving anal function. A first assistant supports the surgeon by providing exposure, assisting with tissue handling, suction, and hemostasis, and facilitating efficient progression of the operation. The scrub technician plays a critical role in maintaining a sterile field, preparing and managing surgical instruments, and anticipating the needs of the surgical team throughout the procedure. The anesthesia team is responsible for preoperative evaluation, selection and administration of appropriate anesthetic agents, intraoperative monitoring, and postoperative recovery support. Effective communication and collaboration among all team members are essential to minimize complications, reduce operative time, and promote optimal surgical outcomes [5][6].

Preparation

Preoperative preparation for hemorrhoidectomy is generally straightforward and aims to reduce procedural risk while maximizing patient comfort. Routine bowel preparation is not considered mandatory; however, the use of a preoperative enema may be beneficial to evacuate the distal rectum and improve surgical visualization. Prophylactic antibiotic administration is not routinely indicated, as hemorrhoidectomy is associated with a low risk of infectious complications. Selection of anesthesia should be individualized based on patient comorbidities, preferences, and procedural considerations. Patients should be counseled that spinal anesthesia is associated with a higher incidence of postoperative urinary retention. Positioning is an important aspect of preparation, with the prone jack-knife position often preferred over the lithotomy position, as it provides improved exposure of the anal region and facilitates surgical access [8].

Technique or Treatment

Surgical hemorrhoidectomy remains the definitive treatment for advanced or refractory hemorrhoidal disease and is broadly classified into two principal techniques: closed hemorrhoidectomy, commonly referred to as the Ferguson technique, and open hemorrhoidectomy, known as the Milligan–Morgan procedure. The Milligan–Morgan approach is more frequently practiced in the United Kingdom and Europe, whereas the Ferguson technique predominates in the United States. Both methods aim to excise diseased hemorrhoidal tissue while preserving normal anorectal anatomy and function,

with the choice of technique influenced by surgeon preference, training background, and patient-specific factors. The procedure begins with careful exposure of the anal canal using a Hill Ferguson retractor, which allows complete visualization of the three primary hemorrhoidal columns. Although excision may be limited to a single symptomatic column, it is permissible to address all three columns in one operative session when clinically justified. Priority is typically given to the largest and most symptomatic column to ensure optimal symptom relief. Adequate exposure and tissue handling are critical at this stage to minimize trauma to surrounding structures. The affected hemorrhoidal column is gently compressed at its base using DeBakey forceps to ensure that the anoderm remains free of tension, thereby reducing the risk of postoperative wound complications. An elliptical incision is then created around the hemorrhoidal tissue using a number 10 scalpel blade. This incision design facilitates controlled excision while preserving adjacent anoderm and mucosa. Dissection proceeds carefully along the surface of the internal anal sphincter using Mayo scissors, maintaining a precise plane to avoid sphincter injury. The dissection continues proximally until the hemorrhoidal pedicle is fully exposed. Once identified, the pedicle is securely grasped with a large Kelly clamp and ligated using a 3-0 Vicryl suture mounted on a CT-2 needle. This step ensures effective hemostasis and prevents postoperative bleeding [5][11].

To further reduce the likelihood of recurrent prolapse, an additional deeper suture fixation with 3-0 Vicryl is placed at the level of the anorectal ring. This maneuver provides structural support by anchoring the remaining tissue and reinforcing the repair. In the Ferguson technique, the same suture is then used to close the rectal mucosa, anoderm, and perianal skin in a continuous running fashion, resulting in a closed wound. This approach is associated with reduced postoperative bleeding and may promote faster wound healing compared with open techniques. In contrast, the Milligan–Morgan technique leaves the wound open to heal by secondary intention, which may be associated with increased postoperative discomfort but allows effective drainage and reduces the risk of infection in selected cases. Beyond conventional excisional methods, stapled hemorrhoidopexy has emerged as an alternative surgical option. This technique does not involve direct excision of hemorrhoidal tissue. Instead, the hemorrhoidal columns are repositioned above the anal verge and secured by excising a circumferential ring of rectal mucosa using a circular stapling device. Although this method is associated with reduced immediate postoperative pain, evidence demonstrates higher recurrence rates when compared with traditional hemorrhoidectomy. Additionally, histological analyses have revealed inadvertent inclusion of sphincter muscle fibers within resection specimens, which has been linked to transient flatus incontinence following the procedure [2][5][11].

Postoperative management plays a crucial role in patient recovery and overall outcomes. Based on moderate-quality evidence, patients undergoing surgical hemorrhoidectomy are strongly encouraged to follow a multimodal pain management strategy. This approach emphasizes the use of non-opioid analgesics and adjunctive therapies to control pain while minimizing reliance on narcotic medications. Effective pain control not only enhances patient comfort but also facilitates early mobilization, improved bowel function, and a more rapid return to daily activities, thereby supporting optimal postoperative recovery [11].

Complications

Surgical hemorrhoidectomy is generally safe and effective; however, patients should be counseled regarding potential complications, both early and late, to set realistic expectations and facilitate timely intervention if adverse events occur. Mild to moderate pain and a sensation of anal fullness are nearly universal within the first week following both excisional hemorrhoidectomy and hemorrhoidopexy. Effective postoperative pain management is therefore essential and often includes a combination of systemic analgesics, topical anesthetics, and stool softeners to minimize discomfort during defecation. Early recognition and management of postoperative complications significantly influence recovery outcomes and patient satisfaction. Among the early complications, postoperative bleeding and urinary retention are most commonly observed. Hemorrhage typically occurs within the first 24 to 48 hours but may also present as delayed bleeding in the first week post-surgery. Post-procedure hemorrhage is the most frequently reported complication, with incidence rates ranging from 1% to 2% in larger clinical series [2]. Acute urinary retention is reported in approximately 1% to 15% of patients and is a leading cause of delayed discharge. The risk of urinary retention is particularly elevated following spinal anesthesia and procedures that involve hemorrhoidal artery ligation. Strategies to reduce this risk include careful titration of intravenous fluid volume, judicious use of local anesthetics, and early mobilization postoperatively [12][13].

Although less common, rare but potentially life-threatening complications may occur. These include sepsis, perianal or pelvic abscess formation, and massive hemorrhage, all of which require prompt recognition and aggressive management. Clinicians must maintain a high index of suspicion in patients exhibiting systemic symptoms such as fever, tachycardia, hypotension, or persistent uncontrolled bleeding. Early intervention in these cases is critical to preventing morbidity and mortality. Late complications are generally infrequent but may have

a lasting impact on anorectal function and patient quality of life. Anal stenosis can result from excessive excision of anoderm or mucosa, leading to difficulty with defecation and the potential need for further surgical intervention. Residual skin tags may persist or develop, which, while typically benign, can cause discomfort or hygiene challenges. Recurrent hemorrhoids remain a recognized risk, particularly if excision is incomplete or if contributing lifestyle factors such as chronic constipation or straining persist. Delayed hemorrhage may also occur, often secondary to premature sloughing of suture ligatures or tissue necrosis. Fecal incontinence, although rare, can result from inadvertent sphincter injury, extensive tissue resection, or postoperative scarring, highlighting the importance of meticulous surgical technique. Comprehensive preoperative counseling, adherence to meticulous surgical technique, and vigilant postoperative monitoring are essential to minimizing complications associated with hemorrhoidectomy. Patients benefit from structured follow-up protocols that allow early detection and management of adverse events. By combining careful patient selection with evidence-based perioperative care, the incidence and severity of complications can be minimized, optimizing long-term outcomes and enhancing patient satisfaction [12][13].

Clinical Significance

Hemorrhoidal columns represent normal anatomical structures within the anal canal that play a physiological role in maintaining continence and anal closure pressure. While inherently nonpathological, these vascular cushions can become symptomatic, manifesting as bleeding, prolapse, pain, or discomfort, which necessitates targeted clinical management. First-line treatment for symptomatic hemorrhoids is predominantly conservative, emphasizing dietary modification, increased fiber intake, and patient education on bowel habits. Fiber supplementation has been consistently demonstrated to improve stool consistency, reduce straining during defecation, and alleviate symptoms, serving as a critical component of nonoperative management [3]. Patients should receive guidance regarding adequate hydration alongside fiber intake to optimize therapeutic outcomes and prevent gastrointestinal discomfort. When conservative measures fail, or in cases of advanced prolapse, surgical excision becomes the preferred treatment strategy. Surgical hemorrhoidectomy, whether open (Milligan–Morgan) or closed (Ferguson), achieves high rates of symptomatic resolution with low recurrence, offering definitive treatment for patients with refractory or grade III–IV disease [8]. Meta-analyses and randomized controlled trials have evaluated the efficacy and outcomes of these techniques, demonstrating that both approaches provide comparable rates of postoperative complications, hemorrhoid recurrence, and infection. However, specific advantages have been noted with closed hemorrhoidectomy. In a meta-analysis encompassing eleven randomized controlled trials and 1,326 patients, the closed approach was associated with reduced postoperative pain, accelerated wound healing, and a lower incidence of postoperative bleeding, while maintaining similar long-term outcomes to the open technique. Additional studies employing bipolar energy in closed hemorrhoidectomy demonstrated shorter operative times, lower pain scores, and comparable complication rates, suggesting that energy-assisted techniques may further optimize procedural efficiency and patient comfort. Similarly, the use of ultrasonic shears has been correlated with earlier return to work, decreased postoperative pain, and fewer complications compared with conventional techniques, though randomized trials comparing energy devices directly have reported equivalent pain scores and clinical outcomes, highlighting the need for further research to establish cost-effectiveness and optimal application [3].

Postoperative pain remains a significant clinical concern following hemorrhoidectomy. A comprehensive review of over 115,000 patients across various surgical procedures ranked post-hemorrhoidectomy pain among the higher levels of postoperative discomfort, emphasizing the need for effective analgesic strategies. Several modalities have been explored to mitigate pain and enhance recovery. Topical agents, such as 2% Diltiazem ointment and nitroglycerin, have demonstrated significant reductions in pain scores, decreased narcotic requirements, and earlier return to routine activities in multiple trials and meta-analyses. Additionally, surgical sphincterotomy (lateral internal sphincterotomy, LIS) has proven effective in alleviating postoperative pain, reducing urinary retention, and minimizing the risk of anal stenosis, though minor temporary flatus incontinence may occur. Botulinum toxin A administration post-hemorrhoidectomy has also been shown to decrease pain for up to one week without increasing adverse events compared to placebo. Systemic analgesics have been studied as well, though oral metronidazole has not demonstrated significant efficacy in postoperative pain control. In contrast, liposomal bupivacaine (LB) has emerged as a potent modality, providing sustained analgesia and reducing postoperative opioid requirements. In one trial involving 189 patients, LB significantly lowered pain intensity and extended the period before the first opioid dose, with fewer opioid-related adverse events compared to placebo. Another study comparing LB to standard bupivacaine HCl confirmed lower cumulative pain scores and reduced opioid consumption across multiple dosing regimens, reinforcing its clinical utility in multimodal analgesia protocols [14][15]. Overall, hemorrhoidectomy represents a clinically significant intervention for patients with advanced or refractory hemorrhoidal

disease. Evidence supports the superiority of closed techniques and adjunctive energy devices in reducing postoperative pain and promoting faster recovery, while both open and closed approaches maintain similar long-term outcomes regarding recurrence and complications. Comprehensive postoperative management, including multimodal analgesia, topical agents, and targeted surgical adjuncts such as LIS or energy-assisted dissection, is essential to optimize patient comfort, accelerate functional recovery, and minimize opioid exposure. These findings underscore the importance of individualized care plans that integrate patient-specific factors, procedural technique, and evidence-based pain management strategies to achieve optimal clinical outcomes [14][15].

Enhancing Healthcare Team Outcomes

Hemorrhoidal disease is a prevalent anorectal condition that affects a significant portion of the population and, despite its relative ease of diagnosis, often presents challenges in achieving optimal treatment outcomes. Effective management requires a coordinated, interprofessional approach that integrates the expertise of clinicians, nursing staff, dietitians, and pharmacists. Each member of the healthcare team interacts with patients in different clinical settings, tailored to the severity and acuity of the disease. Accurate assessment of internal hemorrhoid prolapse is crucial, as it guides treatment decisions ranging from conservative management to office-based procedures or surgical intervention. Early recognition and management of acutely thrombosed external hemorrhoids also enhance patient safety, reduce complications, and improve overall satisfaction. Clinical practice guidelines provide several evidence-based recommendations for the management of hemorrhoidal disease. Increasing dietary fiber intake remains the cornerstone of first-line medical therapy, effectively improving stool consistency and reducing straining during defecation. Patients with grade I or II internal hemorrhoids can often be successfully managed in an outpatient setting using office-based procedures such as rubber band ligation, which provides symptom relief without the need for extensive surgical intervention [2]. Excisional hemorrhoidectomy is reserved for patients with grade III or IV hemorrhoids, recurrent disease, or persistent symptomatic hemorrhoids that do not respond to nonoperative measures. These recommendations highlight the importance of individualized treatment planning based on disease severity, patient comorbidities, and response to prior interventions. Patient education is a critical component of care and serves as a preventive measure in the long-term management of hemorrhoidal disease. Nurses, dietitians, and pharmacists play essential roles in counseling patients regarding lifestyle modifications, including adequate hydration, regular physical activity, and dietary fiber supplementation. Additionally, education regarding the avoidance of excessive use of opioid or other constipating medications is important, as these can exacerbate symptoms and hinder recovery. Effective communication across the interprofessional team ensures that patients receive consistent and comprehensive guidance, which can reduce recurrence and improve postoperative outcomes [2].

Despite adherence to recommended treatment protocols, surgical outcomes vary, with residual pain and recurrence occurring in a subset of patients following nearly every intervention. This variability underscores the value of interprofessional collaboration in enhancing care quality. Clinicians provide accurate diagnosis, procedural expertise, and follow-up care, while nurses monitor recovery, manage wound care, and provide patient education. Pharmacists contribute by optimizing analgesic regimens, recommending stool softeners, and preventing medication-induced constipation. Dietitians reinforce nutritional counseling to improve bowel habits and overall gastrointestinal health. Coordination among these professionals ensures that all aspects of care, from diagnosis and treatment to recovery and prevention, are addressed comprehensively. The integration of interprofessional strategies in the management of hemorrhoidal disease not only improves patient safety and satisfaction but also promotes efficient resource utilization, reduces complications, and facilitates faster recovery. When each member of the healthcare team fulfills their role and communicates effectively, patients benefit from a seamless care experience, improved adherence to preventive strategies, and a reduction in disease recurrence. Consequently, fostering interprofessional collaboration and shared responsibility is essential for achieving optimal outcomes in both nonoperative and operative management of hemorrhoidal disease [2].

Nursing, Allied Health, and Interprofessional Team Interventions

Effective management of patients undergoing hemorrhoidectomy relies on a coordinated interprofessional approach, ensuring that each team member contributes to the patient's safety, education, and recovery. The process begins with confirming that the patient has provided written informed consent, which ensures that the patient understands the procedure, potential risks, and expected outcomes. Nurses play a primary role in this process, verifying that the patient has received appropriate counseling and has had the opportunity to ask questions. Education is a central component of preoperative preparation, as patients must understand the nature of hemorrhoidal disease, the rationale for surgical intervention, and the steps involved in the procedure. This education helps reduce anxiety, improve cooperation, and increase adherence to postoperative instructions. During the operative

phase, nurses and allied health professionals assist in positioning the patient optimally, whether in the prone jack-knife or lithotomy position, ensuring comfort, accessibility, and safety. Proper positioning reduces the risk of pressure injuries and facilitates optimal surgical exposure for the surgeon. Scrub technicians and surgical assistants provide direct support to the surgeon by handling instruments, maintaining a sterile field, and anticipating procedural needs. Postoperatively, the interprofessional team focuses on patient education regarding wound care, activity restrictions, and the use of sitz baths to promote hygiene, reduce inflammation, and facilitate healing. Nurses provide instructions on the frequency, duration, and technique of sitz baths, emphasizing temperature and positioning to maximize comfort and effectiveness. Pharmacists contribute by reviewing analgesic regimens, recommending stool softeners, and ensuring medications do not exacerbate constipation. Dietitians provide guidance on fiber intake and hydration to promote bowel regularity. Through these coordinated interventions, the interprofessional team ensures that the patient receives comprehensive care, from preoperative preparation through recovery, enhancing outcomes and satisfaction [15].

Nursing, Allied Health, and Interprofessional Team Monitoring

Monitoring patients throughout the perioperative period is a critical responsibility of the interprofessional team, aimed at identifying complications early and ensuring optimal recovery. During surgery, the anesthesia team closely observes vital signs, oxygen saturation, and hemodynamic stability, while nurses and surgical assistants ensure sterile technique, proper instrument use, and patient positioning. Continuous intraoperative monitoring allows for immediate intervention in cases of bleeding, hypotension, or other adverse events, minimizing the risk of perioperative complications. Postoperatively, nursing staff provide intensive observation during the initial recovery period, assessing vital signs, pain levels, and signs of urinary retention or hemodynamic instability. Early detection of postoperative bleeding is essential, as hemorrhage represents one of the most common complications following hemorrhoidectomy. Nurses assess the surgical site for active bleeding, hematoma formation, or excessive drainage, reporting any abnormal findings to the surgical team promptly. Pain assessment is conducted systematically, using validated pain scales to guide analgesic administration and evaluate the effectiveness of multimodal pain management strategies. Pharmacists monitor opioid use and recommend adjunctive therapies, while dietitians ensure dietary modifications are followed to prevent straining and constipation, which can exacerbate pain or compromise healing. Continued monitoring also includes education on self-care, such as sitz bath technique, hygiene, and early mobilization to prevent complications like infection or venous stasis. Interprofessional communication is essential; all team members must document findings, discuss patient progress, and collaborate on modifications to the care plan as needed. This structured, multidisciplinary monitoring ensures timely interventions, enhances patient safety, promotes recovery, and reduces the risk of long-term complications, thereby improving overall outcomes following hemorrhoidectomy [14][15].

Conclusion:

Hemorrhoidal disease significantly affects patient comfort and quality of life, particularly in advanced stages requiring surgical intervention. Hemorrhoidectomy remains the most effective treatment for grade III and IV hemorrhoids, offering durable symptom relief and low recurrence when performed using evidence-based surgical techniques. However, optimal outcomes extend beyond the operative procedure itself and rely heavily on comprehensive perioperative nursing care and interprofessional collaboration. Nurses play a pivotal role in patient education, surgical preparation, postoperative monitoring, pain control, and prevention of complications such as bleeding, urinary retention, infection, and constipation. The integration of multimodal pain management strategies, along with dietary counseling and bowel regulation, enhances recovery and reduces opioid dependence. Effective communication among surgeons, nurses, dietitians, pharmacists, and other healthcare professionals ensures continuity of care and improves patient satisfaction. Overall, a structured, patient-centered, interprofessional approach is essential to improving clinical outcomes and promoting safe, efficient recovery following hemorrhoidectomy.

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