

EFFICACY OF TAMPONADE DRESSINGS AFTER PERIANAL ABSCESS SURGERY

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ABSTRACT

Perianal abscess is a common anorectal infection requiring prompt surgical drainage. Postoperative management of the residual cavity remains variable, and the role of tamponade dressings in promoting wound healing continues to be debated. A 28-year-old male driver presented with a two-day history of progressively enlarging perianal swelling associated with pain and one day of fever. Clinical examination revealed a 3 × 4 cm tender, indurated swelling at the 9 o'clock position in the perianal region. Per rectal examination was unremarkable, and a diagnosis of acute perianal abscess was established. The patient underwent emergency incision and drainage, yielding approximately 10 mL of pus. A tamponade dressing was applied postoperatively and changed every three days. On postoperative day 1, the wound was healthy with minimal slough and no active discharge. By postoperative day 4, healthy granulation tissue was observed, and the patient was discharged with satisfactory wound healing. This case demonstrates that tamponade dressings may support effective postoperative wound healing following perianal abscess drainage by facilitating drainage and promoting granulation tissue formation.

KEYWORDS: Perianal abscess; Tamponade dressing; Incision and drainage; Wound healing; Granulation tissue

1. INTRODUCTION

Wound healing after surgery plays an important role in determining the outcome of surgery especially when involving contaminated anatomical areas. There are a number of wound care techniques that have been created to help heal the wound, reduce infection, and aid in healing. Postoperative wound management is an important aspect of surgical care and appropriate techniques have been demonstrated to affect the development of granulation tissue and the overall healing process of the wound [1]. An anorectal infection caused by obstruction and infection of anal glands is a common problem called perianal abscess. Signs and symptoms include pain, swelling, tenderness, erythema, and sometimes fever. The infection can spread to contiguous tissue planes and cause a high morbidity rate if it is not treated appropriately. Thus, the management of sepsis must be timely to control it and to maintain the integrity of tissues [2].

Perianal abscesses, in their acute form, are normally managed using surgical approaches such as incision and drainage. Wound resting of any pus will play an important role in symptom relief, reducing tissue pressure and preventing the spread of infections. However, managing this condition does not only involve the surgical procedure itself but involves wound care after the operation as well. In cases of anorectal surgery, research indicates that wound cavity maintenance may affect wound drainage and healing although to what extent has yet to be established [3]. The treatment of the cavity left behind after drainage of the abscess is still a clinical topic of interest. There are various postoperative techniques available, such as cavity packing, standard dressings, wound dressings with drugs and medical applications, and advanced methods of wound care. The debate on the need and efficacy of routine packing of perianal abscess cavity after drainage was further emphasized by a randomized clinical trial that looked at postoperative packing of perianal abscess cavity [4].

Dressings traditionally employed for tamponade have been used to keep cavities patent, to promote continuous drainage, to prevent early wound closure and to inhibit re-accumulation of infected collections. The same concept of wound management has been used in other cases of perineal and soft tissue disorders where it is thought to be advantageous for the recovery of tissues and control of infections [5]. The use of tamponade dressings is controversial due to their widespread use. Other wound care strategies such as negative pressure wound therapy, and reconstructive surgery techniques for complex perineal wounds have been shown to be effective in some patients and should be further investigated for effectiveness of conventional packing [6]. In addition, the experience of acute surgical infections suggests that careful post-operative management and follow-up is fundamental to obtaining good healing from surgical wound infections [7].

Perianal abscess is still one of the most frequently seen anorectal emergencies in surgical practice. Incision and drainage is universally agreed upon as the main form of treatment, but there is variation in post-treatment dressings. At the present time, there is some evidence that postoperative wound management can affect the healing process, comfort and complications rates [8]. Another problem after draining an abscess is the formation of an ano fistula. The risk factors for fistula formation have been discussed previously, and it is suggested that a proper management of the cavity after the

surgery may help to minimise the adverse outcomes, although conclusive evidence that one dressing technique is superior to another is still few [9].

The present case report is a case of acute perianal abscess that was managed by emergency incision and drainage and tamponade dressing which will highlight the management of wound healing and short term clinical recovery.

2. CASE PRESENTATION

2.1 Patient Information

The 28-year-old male who works as a driver from Chennai visited the General Surgery Department with symptoms of swelling in perianal region, along with pain and fever. The patient was healthy, with no known underlying conditions or surgical operations in the past.

2.2 Clinical History

The patient reported acute swelling in his perianal area for two days with progressive increase in size. It was accompanied by pain that occurred for two days and caused him considerable discomfort when he sat and carried out his normal activities. He also presented with fever that had started one day before consultation. He denied any history of past perianal abscess, fistula in ano, inflammatory bowel disease, tuberculosis, diabetes mellitus, and immunosuppression. He did not have any past anorectal surgery. His demographic data and presenting symptoms are outlined in Table 1 below.

Table 1. Clinical Timeline and Presenting Complaints

Clinical Event	Details
Age/Sex	28-year-old Male
Occupation	Driver
Residence	Chennai
Perianal swelling	Present for 2 days
Nature of onset	Sudden onset
Progression	Gradually increasing in size
Pain	Present for 2 days
Fever	Present for 1 day
Comorbidities	None
Previous surgical history	None

2.3 Clinical Examination

General Examination

The patient was conscious, oriented, and hemodynamically stable on admission. His vital parameters were all within the normal range, and there were no signs of systemic toxicity.

Local Examination

Physical examination of the perianal area revealed a single swelling sized 3 × 4 cm at 9 o'clock from the anal verge. It was noted that the swelling was warm, tender, and firm. There was no discharge of pus noted during physical examination.

Per Rectal Examination

There were no findings on digital rectal examination of any internal opening or discharge . Otherwise, the examination was negative.

2.4 Diagnosis

With consideration of the patient's symptoms and physical examination results, a diagnosis of perianal abscess was made.

2.5 Surgical Intervention

Since it was an acute case and localized suppuration was present, the patient was scheduled for emergency incision and drainage under proper anaesthesia. After the necessary preparations, the abscess was incised over the area where it had the maximum fluctuance. Around 10 mL of pus was drained from the abscess cavity. Decompression of the cavity was confirmed. Table 2 shows the important aspects of the surgical procedure.

Table 2. Operative Findings and Surgical Management

Parameter	Findings
Diagnosis	perianal abscess
Procedure performed	Emergency incision and drainage
Location of abscess	Perianal region, 9 o'clock position
Size of swelling	3 × 4 cm
Pus drained	Approximately 10 mL
Intraoperative finding	Localized abscess cavity with purulent collection

2.6 Postoperative Tamponade Dressing Protocol

Once the wound cavity has been successfully drained, a tamponade dressing will be placed in the wound cavity to keep the pathway open, allow further drainage of fluid, and ensure that the superficial wounds are not prematurely closed. The tamponade dressing will be placed in the wound cavity immediately after the surgery while taking aseptic precautions. The postoperative appearance of the wound cavity with the tamponade dressing in place is illustrated in Figure 4.



Figure 4. Postoperative tamponade dressing placed within the perianal abscess cavity following incision and drainage. The wound was assessed regularly for any sign of infection, secretion, and granulation tissue.

2.7 Postoperative Outcome and Follow-Up

On postoperative day 1, the wound was examined by removing the dressing. The wound was healthy with minimum amount of slough formation without any sign of active pus discharge from the wound. Following the examination, a tamponade dressing was applied on the wound for proper drainage.

The wound re-examination done on postoperative day 4 revealed the formation of granulation tissues in the wound bed. No active sign of infection or recurrence was noted. The patient showed good recovery and was finally discharged from the hospital. Postoperative wound healing process is presented in Table 3.

Table 3. Postoperative Wound Assessment and Healing Progress

Follow-up Period	Clinical Findings
Postoperative Day 1	Healthy wound, minimal slough, no active discharge, tamponade dressing reapplied
Postoperative Day 4	Healthy wound bed, granulation tissue present, satisfactory healing
Dressing protocol	Dressing changed every 3 days
Outcome	Clinical improvement and discharge

3. DISCUSSION

Perianal abscess is a common anorectal infection which can progress to sepsis and local tissue destruction; therefore surgery is required for prompt treatment. The main goal of the management is to achieve an adequate removal of purulent material, without damaging the surrounding tissues and fostering good wound healing. There are several surgical treatments described for the treatment of perianal abscesses and drainage is still the mainstay of surgical treatment. In a systematic review of incision and seton drainage methods, it was found that adequate drainage is key to the control of infection and to minimizing the postoperative complications, so that a thorough drainage of the abscess cavity is essential [10].

After the drainage, it's all about postoperative wound care. Wound care is a critical part of healing and the residual cavity is often left open to heal by secondary intention. However, studies assessing the internal dressings of perianal abscesses have shown that optimal postoperative management remains unclear and should be tailored to the clinical assessment and healing of the wound [11]. In the regular course of practice, the goal of postoperative care is to keep the wound clean, allow drainage, prevent bacterial colonization and promote tissue healing.

After incision and drainage of perianal abscesses, tamponade dressings have been used traditionally. They suggest that continued drainage of residual exudate, prevention of early closure of the superficial skin, and the likelihood of recurrent abscess formation, is aided by maintaining the cavity patency while promoting granulation tissue formation within the cavity of healing. Modern literature discussing the use of postoperative packing has pointed out that although there is no uniformity in the clinical approach to packing from one institution to another, this practice is still in use [12].

Other methods of wound care have also been tried. In recent years, studies have been conducted to assess the value of some adjunctive therapies for postoperative wound healing, indicating that the local environment of wounds may be optimized for tissue healing and repair [13]. Also the comfort of the patient while being dressed is always taken into account as postoperative wound care can induce discomfort and anxiety. Considering the importance of patient-centered postoperative care, innovative supportive measures have been investigated to enhance the patient experience during the dressing procedure [14].

While adequate drainage, postoperative monitoring, and wound care are still listed as key components of anorectal sepsis treatment in standard surgical literature [15]. But there is some debate about the routine use of packing. A new systematic review and meta-analysis evaluating packing in the treatment of perianal abscesses was recently published, with inconsistent results and a need for more evidence for recommendations for its use [16].

In the current scenario, the evacuation of fluid is carried out in emergency, thereby permitting immediate decompression of the abscess cavity where 10 ml of pus was drained. When evaluated postoperatively, the wound appeared to be healthy and had minimum sloughing with no active drainage noted within a day after surgery. After this continued tamponade dressings, the formation of healthy granulation tissue was observed since post-operative day 4. No recurrence of any collection during the inpatient follow-up period has been observed. These findings are consistent with the other known factors of good post-operative prognosis, such as good drainage, absence of infection, and good healing of wounds [17].

The present example clearly shows how tamponade dressings can be used as a tool to facilitate management of the patient who underwent the procedure of perianal abscess excision. It becomes evident that proper management of this patient was successful due to the good outcome of treatment, which should prompt us to take care about wound healing and the need for follow-up after surgery. Nevertheless, it should be noted that such conclusions cannot be treated as the final ones because it is just one observation within a short time interval.

4. CONCLUSION

A perianal abscess is one of the most common surgical problems that occur around the anorectal area and needs incision and drainage at an early stage in order to have sufficient source control and prevent any complications. Although surgical intervention is the key method for the treatment of a perianal abscess, wound care postoperatively is crucial. The application of tamponade dressings after surgery in this particular patient ensured that there was proper wound healing, seeing that the patient had characteristics such as a clean wound base, formation of slough was not witnessed, pus was not formed, and granulation tissue formation. It appears that the dressing created a conducive environment for drainage of the cavity and did not allow for early formation of surface seal, hence wound healing by secondary intention. There were no signs of recurrence of collection after the surgery. This case illustrates how tamponade dressings are helpful in treating cases where the patient has had surgery due to a perianal abscess. However, more studies need to be conducted.

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