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Original Research Article

Benign Perianal Disease: Current Trend of Surgical Management in Periphery Hospital

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Abstract

Benign anal or perianal conditions including haemorrhoids, anal fissures, perianal abscesses, and fistulae are commonly observed in general practice. This study carried out to evaluate the most common perianal conditions in adult patients of varying age treated surgically in a periphery general hospital, examining complications, recurrence and mortality rates. A prospective cross sectional study was conducted, at Almikhwah General Hospital, with a minimum follow-up of 6 months. A total of 75 patients subjected to surgical treatments for bengin perianal disease were eligible. Their mean age was 35.8 years, and male to female ratio was 1.8:1. The mean duration of symptoms was 35.6 days. The most common conditions were abscess and haemorrhoids that's seen in 44% and 29% respectively, whereas, fistula in ano was the least (6.7%). The mean hospital stay was 2.1. Complication was encountered in 1.3%. The mean duration of analgesic use was 2.07. One year follow up revealed no recurrence or mortality. In conclusion, most patients presenting with anorectal symptoms will have benign anorectal pathology and can be successfully treated in the periphery hospital setting.

Keywords: Perianal, Haemorrhoids, Fissure, Abscess, Fistula in Ano, Surgical outcome.

INTRODUCTION

Anorectal disorders are a group of medical disorders that occur at the junction of the anal canal and the rectum (Figure-1). They are common, and their prevalence in the general population is probably much higher than that seen in clinical practice as most patients do not seek medical attention [1].

Proper history and physical examination usually will determine the etiology. Physical examination includes visual inspection, digital rectal examination, and anoscopy [2].

Haemorrhoids, or "piles", is one of the most common anorectal disorders, with a prevalence of 39% of the population. It may be internal or external, depending on its relation to the dentate line. There are four grades of internal haemorrhoids as described by Goligher, and they can be classified using the definitions in Table-1.

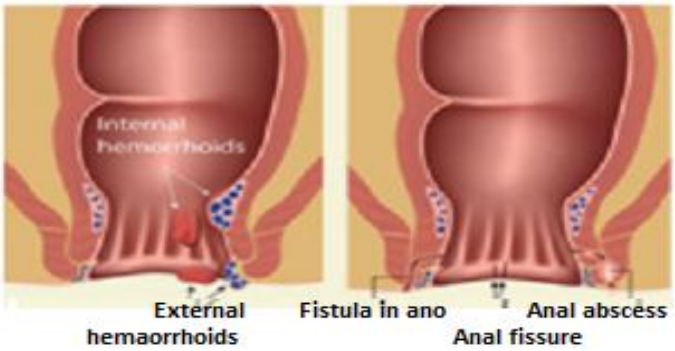

Fig-1: Common benign anal and perianal diseases

Table-1: Classification of internal haemorrhoids

Grade	Definition
I	Normal appearance externally, bleeding but not prolapsing
II	Normal appearance externally, bleeding but not prolapsing
III	Anal cushions prolapse on straining or exertion and require manual reduction
IV	Permanent prolapse, irreducible

The ideal of operation for haemorrhoids should be effective with a low rate of recurrence, minimal post-operative pain to allow early return to normal activities, and safe with minimal morbidity [3].

Fistula-in-ano is one of the most common benign colorectal diseases, and defined as an epithelialized abnormal tract connecting two surfaces, usually the rectal mucosa and perianal skin [4, 5]. The true prevalence of fistula-in-ano is unknown. The incidence in men and women is 12.3 per 100,000 and 5.6 per 100,000, respectively [4].

Fistulae should be suspected in any patient with discharge, pain, swelling, or bleeding. On physical examination, there may be spontaneous or digitally-expressed discharge, an open sinus, granulation tissue, or a palpable cord [2].

The simplest system of classification of perianal fistulae is to divide fistulae into either low or high, depending on their relationship to the dentate line, fistulae that originate below the dentate line are considered to be low fistulae, whereas those above or at the dentate line are considered to be high [4, 6]. Conventional surgical options for a simple FIA include a fistulotomy and fistulectomy. A fistulectomy involves complete excision of the fistulous tract, thereby eliminating the risk of missing secondary tracts and providing complete tissue for histopathological examination. A fistulotomy lays open the fistulous tract, thus leaving smaller unepitheliazed wound, which hastens the wound healing [4].

A perianal abscess (PAA) is a generic term encompassing the collection of pus to form an abscess in the perianal, intersphincteric, ischiorectal or pelvirectal spaces. Most perianal abscesses arise from the occluded duct of an anal gland with subsequent bacterial overgrowth and abscess formation [7]. Its peak incidence in the third or fourth decade of life and it is two or three times more common in men than women [8]. The cornerstone of its treatment is surgical incision and drainage. About 40% of patients present with a fistula after simple incision and drainage of such abscesses. However it is not entirely clear which patients go on to develop a fistula. Some studies have proposed that positive cultures of gut related organisms at the time of surgery, increases the likelihood of an underlying fistula, while others found that this is of no predictive value [7].

An anal fissure is a longitudinal tear or defect in the skin of the anal canal distal to the dentate line [9]. Although the exact incidence is unknown, it is a common disorder, with equal gender distribution. Fissures can occur at any age, but are usually seen in younger and middle-aged adults. In almost 90% of cases, fissures are identified in the posterior midline, but can be seen in the anterior midline in up to 25% of affected women and 8% of affected men. An additional 3% of patients have both anterior and posterior fissures. Fissures occurring in lateral positions should raise suspicions for other disease processes, such as Crohn's disease, tuberculosis, syphilis, human immunodeficiency virus (HIV)/ acquired immunodeficiency syndrome (AIDS), or anal carcinoma [10]. The chronic anal fissure was defined by duration of symptoms longer than 3 months, the presence of induration at fissure edges, sentinel pile, hypertrophied anal papillae, and circular muscle fibers at the base of the cutaneous defect [11]. Sphincter hypertonia engendering local ischemia is considered as the main causal mechanism. Medical management is to be offered as a primary approach, with treatment of constipation being a mainstay of conservative therapy. However, when symptoms persist after 4 to 8 weeks of appropriate medical treatment, surgery should be considered [12]. All management options aim to reduce anal tone. They include general measures such as dietary fiber supplements, adequate fluid intake, and topical analgesics, medical treatments such as glycerin trinitrate (GTN) ointment, calcium channel blockers (e.g. diltiazem cream) and botulinum toxin. Surgery includes lateral sphincterotomy, advancement flap procedures and fissurectomy [13].

With attention, a good history, and a thorough physical examination, these common problems are not difficult to diagnose or treat [14].

To our knowledge there are few original articles collectively addressing a common benign perianal conditions. This study aimed to evaluate the common types of benign perianal condition presented to a periphery hospital, and operative outcome.

Patients and Method

Almekhwah general hospital, Albaha, Saudi Arabia, a small general hospital with 70 inpatient beds. At the hospital the treatment modalities for benign perianal conditions such as incision and drainage for

abscess, lateral sphincterotomy for fissure, haemorrhoidectomy for 3rd and 4th degree piles, fistulotomy or fistulectomy for low FIA and seton for high FIA. It is performed by surgeons of varying grades and experience, ranging from the most junior specialist to the most experienced senior consultant. A non probability total coverage cross-sectional study included all consecutive adult patients with benign perianal disease who underwent an appropriate surgery over a one year period (January 2018 – December 2018) after acceptance of the informed consent. Ethical clearance was obtained from hospital authority prior to conduct this study. The following parameters were analyzed: age, gender, co-morbid disease, morbidity, mortality, recurrence and length of hospital stay. To provides significant postoperative pain relief our protocol was to use of intraoperative perianal local anaesthetic infiltration as an adjunct to general anaesthesia techniques. Postoperatively patients given 50 mg IM pethidine PRN, and paracetamol infusion 1 gm TDS in the 1st 24 hours. Thereafter discharged on oral diclofenac sodium if not contraindicated plus paracetamol for maximum 3 days. Any packing were removed after 4 hours, and if the dressings are in place were removed the following morning or at the first bowel movement. The patients was encouraged to take sitz baths (very warm water soak -- do not burn skin) for five minutes two to four times a day, especially after every bowel movement to keep clean, thereafter using of a towel to keep dry. As well as patient advised to take a high fiber diet and given a course of stool softener.

Patients were followed in out-patient basis at regular intervals (3, 6, 12 months). Scheduled follow-up lasted until one year postoperatively and patients could seek consultation freely thereafter. Statistical analysis was performed by using the Statistical Package for Social Sciences 21.0 for Windows (SPSS Inc., Chicago, IL). Continuous variables and proportions were compared by using Chi square test.

RESULTS

The study included 75 patients from both gender. Their age ranged from 14 to 94 years, with mean age of 35.8 ±15.5 years. Male to female ratio was 1.8:1 (Figure-2). The mean duration of perianal symptoms was 35.6 days (range 1 day to 180 days). Of them 72 (96%) patients with primary symptoms and only 3 (4%) were recurrent.

The most common conditions were abscess and haemorrhoids that's seen in 44% and 29% respectively (Table-2).

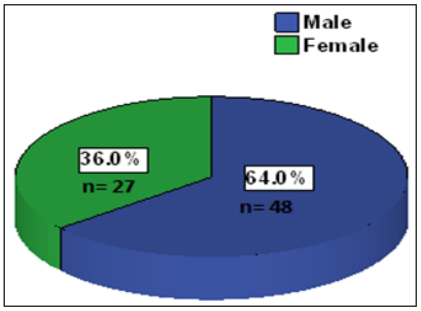

Fig-2: Gender distribution

Table-2: Frequency of benign perianal conditions

Diagnosis	Frequency	Percent
Abscess	33	44.0
Haemorrhoids	22	29.3
Fissure	15	20.0
FIA	5	6.7
Total	**75**	**100.0**

Perianal abscesses were managed by incision and drainage, chronic anal fissure by lateral sphincterotomy, 3rd and 4th degree piles by haemorrhoidectomy, low fistula in ano by fistulotomy or fistulectomy and seton for high FIA (Figure-3).

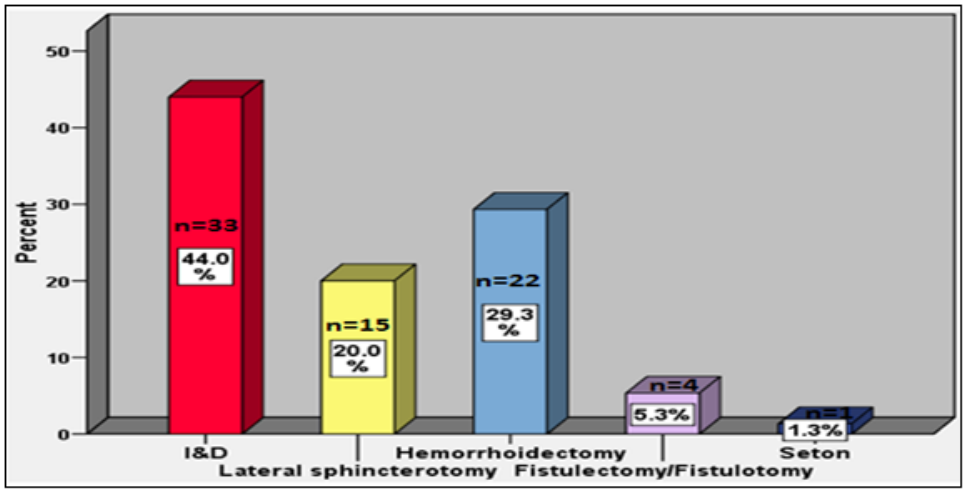

Fig-3: Surgical intervention

In current study patients with abscess 2 patients (6.06%) have diabetes mellitus, and one patient (3.03%) with sickle cell anemia. Among those with FIA 1 (20%) patient has diabetes mellitus. Whereas in patients with haemorrhoids 2(9.09%) patients have DM and 1 (4.5%) patient had SLE (Table-3).

Prophylactic antibiotics was administered to 36 patients (48%), whereas the majority (39 patients (52%)) received antibiotics as a treatment. Postoperatively, the mean duration of analgesic used was 2.07±0.9 days (range, 1 to 7 days).

Table-3: Associated co-morbidities

Diagnosis	Associated co morbidities			Total
	DM	Sickle cell Anemia	SLE	
Abscess	2/33 (6.06%)	1/33 (3.03%)	–	3/33 (9.09%)
Haemorrhoids	2/22 (9.09%)	–	1/22 (4.5%)	3/22 (13.6%)
FIA	1/5 (20%)	–	–	1/5 (20%)
Fissure	–	–	–	0/15 (0%)
Total	5/75 (6.7%)	1/75 (1.3%)	1/75 (1.3%)	7/75 (9.3%)

The mean hospital stay was 2.1±1.1 days (range, 1 to 7 days).One patient (1.3%) with 4th degree piles who treated by haemorrhoidectomy developed secondary haemorrhage, required exploration under general anaesthesia to control the bleeding vessel. One year follow up revealed no recurrence or mortality.

DISCUSSION

Anorectal surgeries constitute one of the most frequent surgeries performed by the surgeons. Although usually considered minor surgeries, the associated morbidity of these procedures can be quite debilitating [15]. The mean age of patients in the current study was 35.8 ±15.5 years. In another stydy in Saudia Arabia by Elhassan *et al.*, among patients with perianal abscess they reported similar mean age group (35.9 years) [16]. These were in agreement with the report by Sasivannan and Sreedevi where the perianal symptoms usually presented in late 2nd decade and 3rd decade [17]. Wheras, Sailer *et al.*, reported higher mean age (49 years) [18]. In the current study male to female ratio was 1.8:1, almost similar to that reported by others [17, 19]. Younger age groups and male patients are more affected, and this might be due to travelling, work stress and bad food habits.

In the current study the mean duration of symptoms was 35.6 days (range 1 day to 180 days). In an Indian study by Sasivannan and Sreedevi the duration of symptoms also was varied lasting from 2 days to 50 days [17].

In this study, analysis of perianal disease showed the commonest disease was abscess (44%) and least common anal disease was Fistula in ano (6.7%). In the Indian study anal fissure was the commonest condition (44.5%) and perianal hematoma (4%) was the least presentation [17]. Whereas, in Nigerian study the commonest anal disease was anal fissure (23.8%) and least common perianal disease was Fistula in ano (2.4%) [19].

There is a wide variation in practice regarding the hospital stay following perianal surgeries. This depends on economic constraints, the culture of the population, and the home environment of patients. Hospital stay can range from a few hours after the operation to more than 6 days. Despite ambulatory surgery being practiced in some centers, many patients prefer to be admitted in hospital if possible. This possibly reflects concern regarding the management of severe pain, the need for wound care, and the fear of complications following surgery [20]. In the current study the mean hospital stay was 2.1±1.1 days (range, 1 to 7 days).

Quality of life and the need for its practical clinical application have become important issues in all medical disciplines. It is also increasingly perceived as a significant factor in the management of surgical patients as there is a growing awareness among physicians as well as patients, and need to integrate aspects of functional and psychosocial impairment in medical care [18]. Pain after perianal surgery remains one of the most important patient complaints. The author's practice to infiltrate local anaesthesia at the completion of surgery. This might reduced need of analgesics post operatively. Inadequately controlled pain negatively affects quality of life, function, and functional recovery, the risk of post-surgical complications, and the risk of persistent postsurgical pain [21].

No surgery without complications, in the current study the complication rate was 1.3%, and there was no documented recurrence or mortality.

CONCLUSION

Common benign anorectal disorders include haemorrhoids, anal fissures, anal abscesses and fistulae. Most patients presenting with anorectal symptoms will have benign anorectal pathology and can be successfully treated in the periphery hospital setting.

This study help to know the effectiveness of local anesthesia infiltration to reduce postoperative pain. To our knowledge, the present study is the only one to examine the cumulative incidence, presentation and surgical outcome in the commonest benign perianal conditions.

In future, larger studies are needed to assess patient's satisfaction as it is a component of healthcare quality and is increasingly being used to assess medical care in many countries in the world.

Conflicts of Interest

The authors declare that there is no conflict of interest.

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