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Evaluation of Benign Anorectal Conditions at a District Hospital, Northern Border, Saudi Arabia

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Abstract **Background:** Benign anorectal conditions are common problems include haemorrhoids, fistula in Ano, anal fissure, perianal abscess so it is essential for the clinician to be well-known with these conditions and make an early diagnosis by taking an appropriate history and physical examination, digital rectal examination and proctoscopy. This study aimed to evaluate the most common perianal conditions in adult patients of varying age treated surgically or conservatively, examining complications, recurrence and surgical outcome at Northern Border Region, Saudi Arabia. **Methods:** A Retrospective observational study was conducted to assess the evaluation and management of patients with common anorectal conditions presented in the emergency room or outpatient department of Surgery, Prince Abdul Aziz Bin Musad Hospital, Arar Kingdom of Saudi Arabia during the period of Jan 2023-Dec 2024. Benign anorectal conditions comprise haemorrhoids, anal fissures, fistula in Ano, perianal abscess and rectal prolapse were included in the study. The anorectal carcinoma and irritable bowel diseases were excluded from the study. Data collection included demographic information, clinical assessment of patients, management and outcome recorded in data collection forms. **Results:** This study included one hundred eighty-nine patients with benign anorectal diseases, among them, 113 (60%) were males and 76 (40%) were females. Male: female ratio was 1.5:1. The maximum number of patients aged 31-50 years comprised 65.5% (123 out of 189). The Presenting symptoms of patients with anorectal conditions were most common anal pain (60 %), constipation (50%), protrusion through anus (35%) and rectal bleeding (30%). In this study the patients with benign anorectal diseases include haemorrhoids (45%), anal fistula in Ano (21.1%), perianal abscess (16.5%) and fissure in Ano (13.2%). Out of one hundred eighty-nine patients with anorectal disease, 146 (77.2%) patients underwent surgical treatment and 43 (22.8%) treated conservatively. Follow-up period was 6 months to one year. In the current study the complication rate was 1.5% and there was no documented recurrence or mortality. **Conclusion:** This study emphasized that most patients presenting with anorectal symptoms will have benign anorectal pathology among them haemorrhoids are the most frequent problem, then fistula in Ano and can be successfully treated in the district hospital setting.

Key Words Anorectal Conditions, Rectal Bleeding, Haemorrhoids, Fissure in Ano, Fistula-in-Ano, Recurrence

INTRODUCTION

Anorectal conditions are one of the most usual hesitant conditions seen in primary health care centre [1]. A clinical history combined with local examination, digital rectal examination and proctoscopy can often specify the correct diagnosis [2]. In the United States, it is the fourth leading outpatient gastrointestinal diagnosis, recording for more than 3 million ambulatory care visits each year and its prevalence has been reported to be 4.4% [3]. Clinicians must retain in mind that benign and malignant diseases can often present with similar symptoms [4]. The most common anorectal conditions are haemorrhoids, anal fissures, anorectal abscesses and fistulae and pruritus ani. Internal haemorrhoids are graded from 1 to 4. Grade 1 haemorrhoids bulge into the lumen but do not extend distal to the dentate line. Grade 2 haemorrhoids prolapsed out of the anal canal with straining but reduced spontaneously. Grade 3 haemorrhoids prolapsed out of the anal canal with straining and require manual reduction into normal position. Grade 4 haemorrhoids cannot be reduced and are at risk for strangulation.

There is no conventionally used system for grading external haemorrhoids. Surgical haemorrhoidectomy is typically reserved for those patients with either grade 3 or 4 disease or those in whom banding procedures have failed [5]. Common office-based procedures for grade 1 sclerotherapy, for grade 2 rubber band ligation or infrared coagulation of internal haemorrhoids, Others minimally invasive techniques involve the application of monopolar cautery (electrotherapy), bipolar diathermy (Bicap, HET bipolar system), laser photocoagulation or cryosurgery to cause coagulation and necrosis, which leads to fibrosis in the submucosal layer. They are generally effective for grade I to II internal haemorrhoids, associated with a higher rate of complication and less patient satisfaction [6]. 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 [7]. 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 [8].According to Parks classification there are 4 types of fistulae: inter-sphincteric 45%, trans-sphincteric 30%, supra-sphincteric 20% and extra-sphincteric 5% .Most authors advise the use of proctoscopy in all patients signified to with complicated haemorrhoids and supported by multiple studies that highlight the good accuracy of proctoscopy in discovering haemorrhoids and other anorectal lesions, when competed to flexible endoscopy [9]. The growing tendency to intake artificial foods, increase mental tension, lack of rest and careless attitude to words responding to natural urge such as suppression of defecation and urination also strength the process of disease [10].

Ano-rectal diseases are one of the common diseases which increase at an alarming rate, due to delayed presentation and embarrassment. patients in this region may present late due to referral from primary health care to tertiary hospital take time for appointment.

Objective

The present study aims to evaluate the most common perianal conditions in adult patients of varying age, gender, treated surgically or conservatively, examining complications, recurrence and surgical outcomes, in adult patients presenting to the Surgical OPD and emergency departments of government hospitals in the Northern Border Province of Saudi Arabia from Jan, 2023 to December, 2024.

METHODS

Study Design and Setting

This was a retrospective observational study conducted from Jan, 2023 to Dec 2024 at the Surgical OPD and Accident and Emergency (A&E) Departments of tertiary care government teaching hospitals in the Northern Border Province of Saudi Arabia: Prince Abdulaziz Bin Musaad Hospital, Arar. All patients were examined by specialist and consultant surgeons and assessed by the same surgeon. This study aimed to evaluate the most common perianal conditions in adult patients of varying age, gender, treated surgically or conservatively, examining complications, recurrences and surgical outcomes.

Study Population

All adult patients (≥18 years of age) who presented to the Surgical OPD and emergency departments with a clinical diagnosis of benign anorectal conditions between from Jan 2023 to Dec 2024 were considered for inclusion.

Inclusion Criteria

- Adults (≥18 years) with confirmed diagnosis of haemorrhoids, anal fissures, fistula in Ano, perianal abscess perianal pruritus ani and rectal prolapse
- All the referred patients of anorectal conditions from primary health care
- Patients who underwent any surgical procedure for anorectal problem

Exclusion Criteria

- Patients under 18 years of age
- Patients with anorectal carcinoma
- Irritable bowel diseases
- History of recurrent anorectal problems

Sampling and Recruitment Process

All cases of benign anorectal conditions presenting to the Surgical OPD or Emergency Department during the distinct two-year period were included without any sampling method. Data were collected retrospectively by reviewing hospital admission logs, General surgery records and operating room reports. This approach certified complete inclusion of entitled cases within the study timeframe, from Jan, 2023 to December, 2024. No recruitment or consent was required, given the retrospective nature of the data collection.

Data Collection Procedure

A careful history and clinical examination, visual inspections, digital rectal examinations along with compulsory investigations arranged for the diagnosis of benign anorectal conditions recorded on a clinical proforma. Data were retrospectively extracted from electronic medical records, operating room (OR) logs and the hospital's digital archival system using a standardized data abstraction form. The following variables were recorded:

- **Demographics**: age, gender, comorbidities (e.g., hypertension, diabetes)
- **Clinical Presentation**: Pain during defecation, Rectal bleeding, Perianal swelling, Constipation
- **Diagnostic Workup**; DRE and Proctoscopy findings, fistulogram, preoperative evaluations

- **Management**: options of surgical intervention, conservative treatment
- **Outcomes**: surgical outcome, recurrence

Statistical Analysis

Data collected into a head chart and analysed using Excel-2019 with the help of a medical statistician. Data is summarized in the form of proportions and frequency tables in an Excel -2019 spreadsheet.

RESULT

This study included one hundred eighty-nine patients with benign anorectal diseases, among them, 113 (60%) were males and 76 (40%) were females. Male: female ratio was M 1.5:1 F, the maximum number of patients aged 31-50 years comprised 65.5% (123 out of 189) as shown in Figure 1.

The Presenting symptoms of patients with anorectal conditions were most common anal pain (60 %), constipation (50%), something coming out through anus (35%) and rectal bleeding (30%), the mean duration of perianal symptoms was 32.5 days (range 1 day to 150 days) as showed in Figure 2.

In this study the patients with benign anorectal diseases include haemorrhoids (45%), fistula in Ano (21.1%) anal perianal abscess (16.5%) and others as showed in Table 1.

In this study out of one hundred eight- nine patients with anorectal disease, 146 (77.2%) patients underwent surgical treatment and 43 (22.8%) with conservative treatment. Out of eighty-five patients of haemorrhoids, twenty-one patients were treated conservatively, ten patients with first degree haemorrhoids treated by sclerotherapy with 5% phenol in almond oil, eleven patients with second degree haemorrhoids treated by band ligation, three patients with 3rd degree haemorrhoids treated by stapled haemorrhoidectomy and forty patients with 3rd. and 4th degree haemorrhoids treated by haemorrhoidectomy procedure. In our series forty patients of fistula in Ano among them eight patients were treated conservatively, twenty-six patients who have low fistula underwent fistulotomy and six patients who have high fistula underwent fistulectomy with seton. In this study thirty -one patients were presented with perianal abscess. Two patients treated conservatively while twenty -nine patients were undergoing incision and drainage procedure. Twenty -five patients had fissure in Ano, among them eight were treated conservatively by 2% Glyceryl trinitrate local application, laxative and sitz baths while seventeen patients were treated by lateral sphincterotomy surgical procedure, under anaesthesia. Four patients who have total rectal prolapse underwent surgical procedure abdominal rectopexy and four patients of perianal pruritus' treated conservatively as showed in Table 2.

The mean hospital stay was 2.5±1.5 days (range, 1 to 8 days). Two patient (1.36%) with 4th degree piles who treated by haemorrhoidectomy developed secondary haemorrhage, required exploration under general anaesthesia to control the bleeding vessel. In current study, 3 patients with haemorrhoids (3.5%) have diabetes mellitus and patients with Fistula in Ano 2 (5%) have Diabetes mellitus.

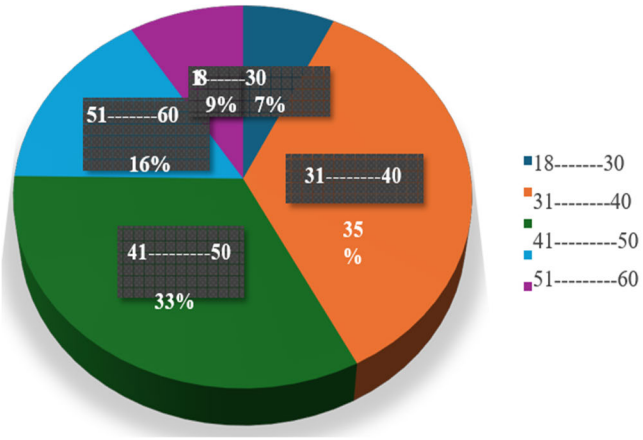

Figure 1: Gender distribution

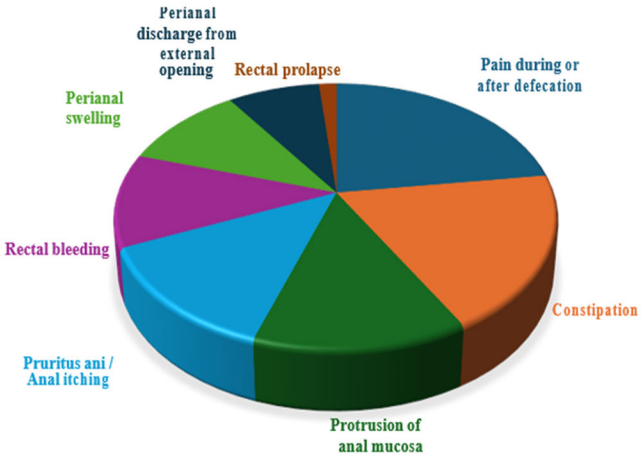

Figure 2: Frequency of Symptoms in patients with benign anorectal conditions

Table 1: Frequency of benign anorectal conditions

Anorectal diseases	Frequency	Percent
Haemorrhoids	85	45.0
Fistula in Ano	40	21.1
Perianal Abscess	31	16.5
Anal Fissure	25	13.2
Rectal prolapsed	4	2.1
Perianal pruritus	4	2.1
Total	189	100.00

Table 2: Surgical intervention in patients with benign anorectal diseases.

Perianal conditions	Office -based and Surgical procedure	No pts	Percent
1st degree haemorrhoids	Sclerotherapy	10	5.29
2nd degree haemorrhoids	Band ligation	11	5.82
3rd degree haemorrhoids	Stapled Haemorrhoidopexy	3	1.58
3rd 4th degree haemorrhoids	Haemorrhoidectomy	40	21.16
Low fistula in Ano	Fistulotomy	26	13.75
High fistula in Ano	Fistulectomy	6	3.17
Perianal abscess	Incision and drainage	29	15.34
Fissure in Ano	Lateral sphincterotomy	17	8.99
Rectal prolapse	Abdominal rectopexy	4	2.11
Total		146	100

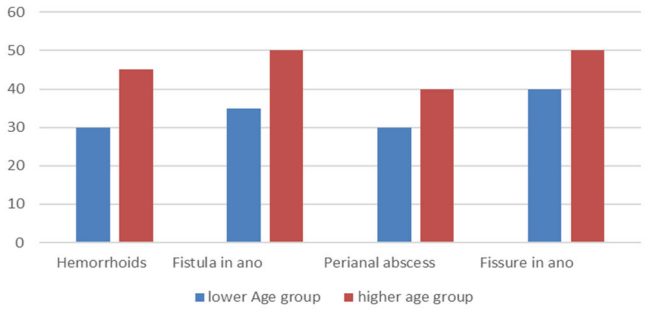

Figure 3: Age -profile of patients with different benign Ano-rectal conditions.

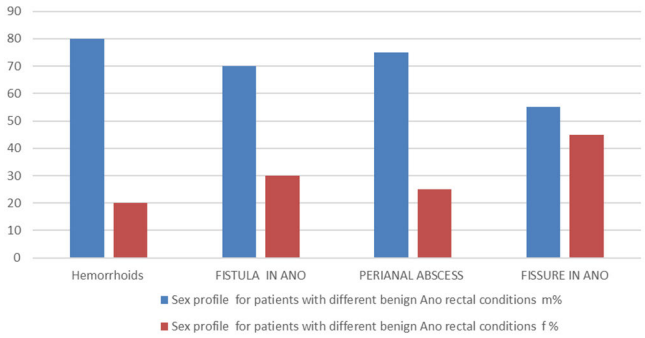

Figure no: 4 Sex -profile of patients with different benign Ano-rectal conditions.

Post Procedure Care and Follow-Up

Following office-based procedures, patients are instructed to avoid constipation by using stool softeners and consuming a diet high in fibre and water. For anal or rectal pain or discomfort, warm sitz baths and oral pain medication are advised. In the current study the complication rate was 1.5% and there was no documented recurrence or mortality. Patients were followed on an out-patient basis at regular intervals (3,6,12 months). Scheduled follow-up lasted until one year postoperatively. In this study patient satisfaction and quality of life was much better after surgical treatment noticed during follow -up.

On review of the literature, up to 80 % of the population with symptomatic benign anorectal pathologies have not referred to a specialist regarding their issues [11]. Statistically, this volume is a huge problem over health services and society too. The common factors which make these diseases an extraordinary burden on society comprise of Illiteracy, social taboos, negligence, poverty, maltreatment, self-treatment and anal sexual habits and unsupervised surgical interventions [12]. The literature shows that haemorrhoids, anal fissure, anal fistula, rectal prolapse are among the commonest anorectal conditions reported [13,14]. The education and awareness play a crucial role in improving the Quality of life of a patient with the disease [15].

In current study Out of one hundred eighty-nine patients with anorectal diseases (60%) were male and (40%) females with Male: female ratio was M 1.5:1 Maximum patients (65.5%) were in age group between 31- 50 years. In another studies in Saudia Arabia by Qureshi *et al.* and Elhassan *et al.* the mean age of patients was 35.8 ±15.5 years, among patients with perianal abscess they reported similar mean age group (35.9 years) respectively [16,17]. The study reported by Sasivannan *et al.* [18] where the perianal symptoms usually presented in late 2nd decade and 3rd decade. The study by Sarla *et al.* also showed a dominance of males (73.8%) in the age group 30-50 years (53.8%) [19]. While the findings of study by Jain *et al.* found haemorrhoids to be more common in males aged >50 years. 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 32.5 days (range 1 day to 150 days) while the findings in study by Qureshi *et al.* show the mean duration of symptoms was 35.6 days (range 1 day to 180 days). Most common presenting complaints were anal pain (60%), constipation (50%) and anal itching (35%). Comparable result in study by Singh *et al.* [20].

In this study analysis of anorectal diseases showed the commonest was haemorrhoids (45%) and least common anorectal disease was rectal prolapse (2%) whereas in study by Qureshi *et al.* the commonest anal disease was perianal abscess (44%) and least common perianal disease was Fistula in Ano (6.7%). In Nigerian study the commonest anal disease was anal fissure (23.8%) and least common perianal disease was Fistula in Ano (2.4%) [21].

Out of one hundred eight -nine patients with anorectal disease, 146 (77.2%) patients treated surgically and forty-three (22.8%) with conservative treatment, comparable results in study by Gawale *et al.* [22]. There is a wide variation in practice regarding the hospital stay following perianal surgeries. This possibly reflects concern regarding the management of severe pain, the need for wound care and the fear of complications following surgery [23]. In the current study the mean hospital stay was 2.5±1.5 days (range, 1 to 8 days) similar results in study by Qureshi *et al.*

In this study four patients present with total rectal prolapse they underwent surgical procedure abdominal rectopexy by a locum colorectal surgeon. Pruritus ani disturbs between 1% to 5% of the people, majority male is affected presented with itching or burning around the perianal area [24]. Pain after anorectal surgery remains one of the most important patient complaints. To relieve pain, we infiltrate local anaesthesia at the completion of surgery. This might reduce need for 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 [25]. In the current study the complication rate was 1.5% and there was no documented recurrence or mortality while in study by Qureshi *et al.* the complication rate was 1.3% and also there was no documented recurrence or mortality.

CONCLUSIONS

This study highlights Common benign anorectal disorders include haemorrhoids, anal fistulae, anal fissures and

perianal abscesses. Most patients presenting with anorectal symptoms will have benign anorectal pathology and can be successfully treated at the district hospital level. To prevent these problems, awareness programs should be continued in the community to take adequate amounts of water, high fibre diet and lifestyle changes

Future Directions

Future research should focus on a multicentre study from different hospitals in the Northern Border region would improve external validity and diet, bowel habits and symptom duration as major variables should be considered in future research Also 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.

Limitations

This study had several limitations include single-centre design and descriptive analysis only.

Ethical Statement

This study was approved by the local committee for bio ethics (LCBE) (HAP-09-043) at Northern Border University, via decision no.(35/25/H), deanship of research and Institutional Review Board (IRB) of Prince Abdulaziz Bin Musaad Hospital. As the research was retrospective in nature and based on anonymized medical records, the requirement for informed patient consent was abandoned. All data were handled confidentially and patient identifiers were removed during the extraction process. Ethical standards consistent with the Declaration of Helsinki were maintained throughout the conduct of the study.

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