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RESEARCH ARTICLE

CLINICO-PATHOLOGICAL PROFILE OF BENIGN ANO-RECTAL DISEASES: HAEMORRHOIDS, FISSURE IN ANO, FISTULAE AT HIND INSTITUTE OF MEDICAL SCIENCES, SAFEDABAD, BARABANKI, UTTAR PRADESH, INDIA

Rajendra Bahadur Singh¹, Vijay Kumar Goel², Raghvendra Pratap Singh³, Sonia Luthra⁴, Arshad Ahmad⁵, Kushal Singh⁶ and Sunil Dubey⁷

1. Professor, Dept. of Gen. Surgery, Hind Institute of Medical Sciences, Safedabad, U.P, India.
2. Professor & Head, Dept. of Gen. Surgery, Hind Institute of Medical Sciences, Safedabad, U.P, India.
3. Assistant Professor, Dept. of Gen. Surgery, Hind Institute of Medical Sciences, Safedabad, U.P, India.
4. Professor, Dept. of Obs& Gynae, Hind Institute of Medical Sciences, Safedabad, U.P., India.
5. Professor, Dept. of Gen. Surgery, King George's Medical University, Lucknow, U.P., India.
6. Assistant Professor, Dept. Radio-diagnosis, Hind Institute of Medical Sciences, Safedabad, U.P, India.
7. Junior Resident, Dept. of Gen. Surgery, Hind Institute of Medical Sciences, Safedabad, U.P, India.

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Abstract

Background: Benign anorectal diseases are frequently encountered conditions presenting to a surgical facility. However, there are limited studies on its epidemiology and clinical profile, especially from countries like India. In the present study, we made an attempt to study the clinical spectrum of different benign anorectal diseases among patients presenting to our facility.

Aim and Objective: To study aetiopathogenesis and clinical presentation of Benign Ano-Rectal Diseases – i.e., Hemorrhoids, Fissures and Fistulae.

Methods: It is an analytical study conducted between January 2021 to June 2022 at Hind Institute of Medical Sciences, Safedabad, Barabamki, Uttar Pradesh, India, where clinical records of all the patients presenting to surgical outpatient department or indoor patients wards with any ano-rectal condition were retrieved and a list of those presenting with benign ano-rectal conditions was made. Spectrum of benign ano-rectal conditions, their age and sex profile were noted.

Results: Majority of patients with benign anorectal conditions were males. The age group of 30–40 years was most commonly affected by anorectal diseases. Pain and constipation were most common presenting complaint followed by bleeding and pus discharge. Among different benign ano-rectal conditions, fissure in anowas the most common.

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Introduction:-

Benign anorectal diseases like haemorrhoids, fissures and fistulae have been a cause of concern ever since the evolution of mankind. Benign anorectal diseases include a spectrum of benign anorectal conditions mainly dominated by hemorrhoids, fissures, and fistulas. Among different anorectal conditions, hemorrhoids happen to be the commonest ones. A hemorrhoid is described as a “symptomatic enlargement and distal displacement of the

Corresponding Author:- Sunil Dubey

Address:- Junior Resident, Dept. of Gen. Surgery, Hind Institute of Medical Sciences, Safedabad, U.P, India.

normal anal cushions". In the United States, it is the fourth leading outpatient gastrointestinal diagnosis, accounting for more than 3 million ambulatory care visits each year and its prevalence has been reported to be 4.4%^{[1][2]}. In India too, hemorrhoids comprise a common benign anorectal problem. In a recent study conducted at a traditional medical facility, hemorrhoids comprised 9.08% of total surgery OPD patients and 50.6% of patients presenting with anorectal complaints^[3]. An anal fissure is "a small break or tear in the skin of the anal canal, which typically runs from below the dentate line to the anal verge, and is usually situated in the posterior midline"^{[4][5]}. It is a cause of severe pain and bleeding with bowel movements.

The overall incidence of anal fissure is 1.1 per 1000 person-years and average life time risk of developing anal fissures is 7.8%^[6]. In a recent study from India, the prevalence of anal fissures among adult patients with anorectal problems was reported to be 17.8%, thus indicating that every sixth patient with any anorectal problem may have anal fissures as the underlying pathology^[7]. An anal fistula is "a pathological connection between the anal canal and perianal skin, which most commonly develops from an infected anal crypt"^[8]. Anal fistula is characterized as "a chronic inflammatory condition, a tubular structure opening in the ano-rectal canal at one end and surface of perineum/peri-anal skin on the other end"^[9]. In Indian traditional medicine, they are known as "Bhagandar, as it does *dāraṇā* (tearing) of *bhaga* (perineum), *guda* (rectum) and *bastipradeśa* (pelvis). Bhagandar is enlisted among *aṣṭamahāgada* (eight intricate diseases)"^[10]. Patients with anal fistulas clinically present with complaints of "perianal cellulitis, anorectal pain, pruritus ani, smelly or bloody drainage of pus, and in some cases, difficulty controlling bowel movements"^{[11][12]}. The annual incidence of anal fistula is reported to be 100 in every one million population. Like hemorrhoids, they are also more common in men as compared to that in women. Almost every 20th patient seeking proctological consultation has been known to have anal fistula as the underlying pathology^{[13][14]}.

Methods:-

Study Design

Analytical Study (Randomized Controlled Study)

Settings

Department of General Surgery, Hind Institute of Medical Sciences (HIMS), Safedabad, Barabanki. HIMS is a tertiary care teaching hospital located in Safedabad, Barabanki a neighboring city to the state capital, Lucknow. It caters to a wide diversity of rural and urban population of Barabanki, Lucknow, Ayodhya and other adjoining areas, primarily belonging to lower middle and middle socioeconomic classes.

Duration Of Study

Eighteen months starting from January 2021 to June 2022.

Sampling Frame

The sampling frame was bound by the following inclusion criterias:

Inclusion Criteria

1. All the patients coming to General Surgery OPD in all surgical units within age group of 12-70 years with different Ano-Rectal conditions.
2. All the admitted patients in General Surgery Department after being seen in OPD or emergency.
3. All the referred patients of the selected category from other clinical departments viz. Obst & Gynae, General Medicine, Orthopaedics and Paediatrics.
4. Only patients with apparently benign aetiology were included.
5. All ano-Rectal trauma cases presenting to the hospital were included for statistical purpose only.

Statistical Tools Employed

The statistical analysis was done using SPSS (Statistical Package for Social Sciences) Version 21.0 statistical Analysis Software. The values were represented in Number (%) and Mean±SD.

Results:-

1. The incidence of anorectal conditions among patients visiting the surgical units of the facility was 21.1%.
2. Benign anorectal conditions comprised 95% of total anorectal conditions seen. (Table 1)

3. Pain with constipation (82.3%), bleeding including pus discharge (77.3%) and anal/perianal itching (64.6%) were the most common presenting complaints among patients with benign anorectal diseases. (Figure 2)
4. Age group 30-40 years was the most commonly affected age group with mean age of patients was 35.89 ± 12.73 years. However, there was a male sex predominance (73.3%). (Figure 5)
5. Among different benign ano-rectal conditions, fissures in ano ($n=2574$; 32.5%) were the most common one, followed by other conditions including abscess, pruritis, trauma etc. in others category ($n=2569$; 32.4%); haemorrhoids ($n=1784$; 22.5%) and fistula in ano ($n=994$; 12.5%) respectively. (Table 1) (Figure 4)
6. Mean age of patients in different ano-rectal conditions ranged from 31.62 ± 12.98 years (haemorrhoids) to 41.38 ± 11.74 years (Fissures in ano). (Table 1)
7. For all the benign anorectal conditions, males were more commonly affected as compared to that of females.
8. Highest proportion of males was seen in patients with haemorrhoids (83.3%) and lowest in patients with fissures in ano (57.6%). (Figure 6)

Figure 1:- Anorectal conditions as a proportion of total surgical cases.

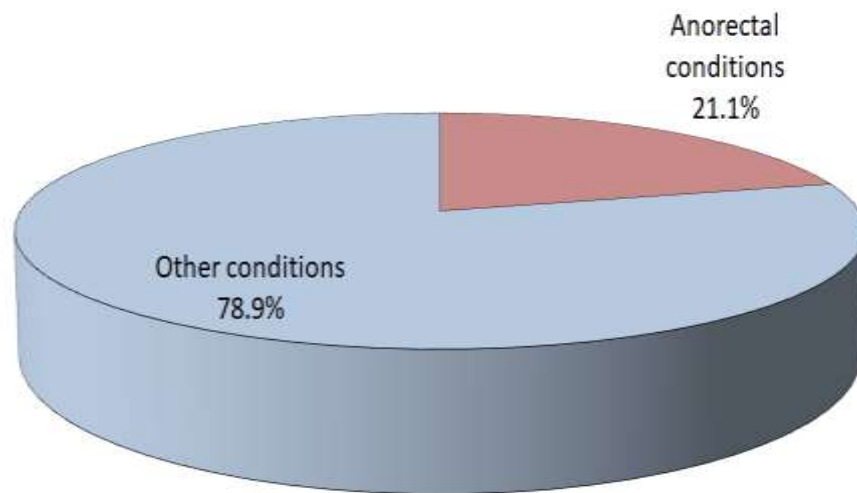


Table 1:- Profile of Benign Anorectal Conditions (Jan 2020-June 2022).

SN	Variable	No. of cases
1.	Patients presenting to surgical OPD and different surgical units of the facility	39558
2.	Patients with ano-rectal conditions	8334/39558 (21.1%)
3.	Patients falling in exclusion criteria	413/8334 (5.0%)
4.	Patients with benign Ano-rectal conditions fulfilling the inclusion and exclusion criteria	7921/8334 (95.0%)
5.	Presenting complaints	($n=7921$)
	Pain with constipation	6520 (82.3%)
	Bleeding/Pus discharge	6121 (77.3%)
	Itching	5819 (64.6%)
6.	Sex profile of patients with benign ano-rectal conditions ($n=7921$)	Male: 5805 (73.3%) Female: 2116 (26.7%)
7.	Mean age \pm SD (Range) in years ($n=7921$)	35.89 ± 12.73 (12-70) years
8.	Spectrum of benign ano-rectal conditions	($n=7921$)
	Fissures in ano($n=2574$;32.5%)	Mean age 41.38 ± 11.74 Years
		Males Females
		1483 (57.6%) 1091 (43.6%)
	Haemorrhoids ($n=1784$;22.5%)	Mean age 31.62 ± 12.98 Years
		Males Females
		1522 (83.3%) 262 (14.7%)
	Fistula-in-ano ($n=994$; 12.5%)	Mean age 33.59 ± 14.37 Years

		Males	Females
		743 (74.7%)	251 (25.3%)
	Others (n=2569; 28.6%)		Mean age 34.24±17.31 Years
	Males	Females	
		2057 (80.1%)	512 (19.9%)

Fig. 2:- Major presenting complaints of patients presenting with benign anorectal conditions.

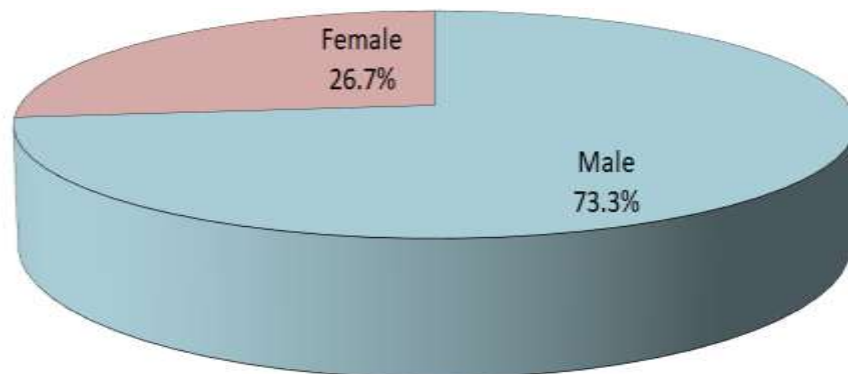
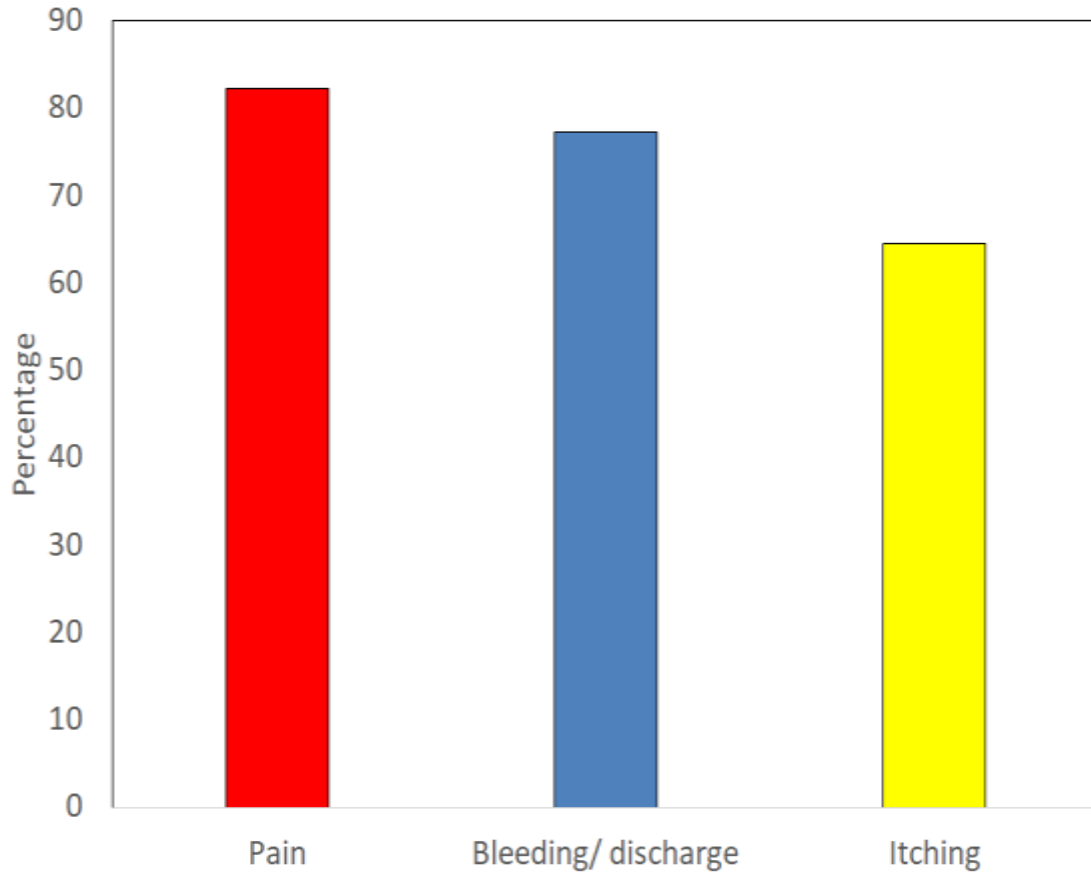


Fig. 3:- Sex-Profile of the patients with benign anorectal conditions

Fig. 4:- Spectrum of different benign anorectal conditions.

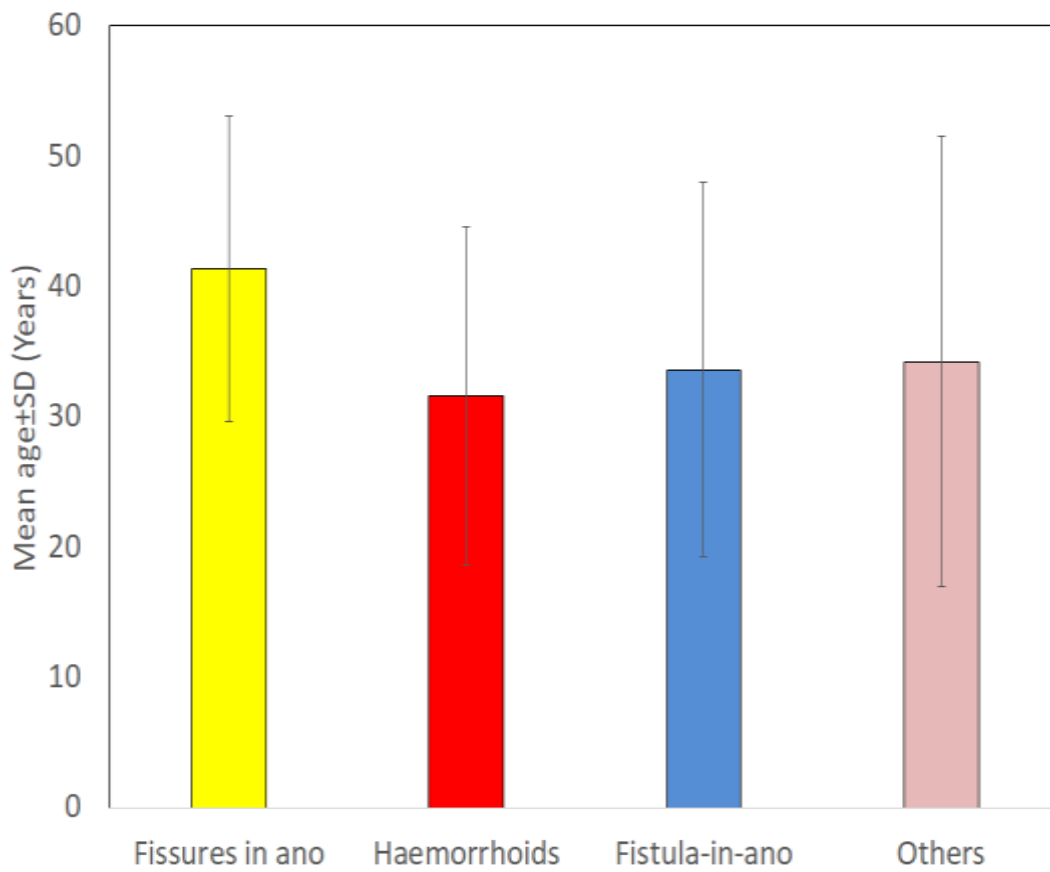
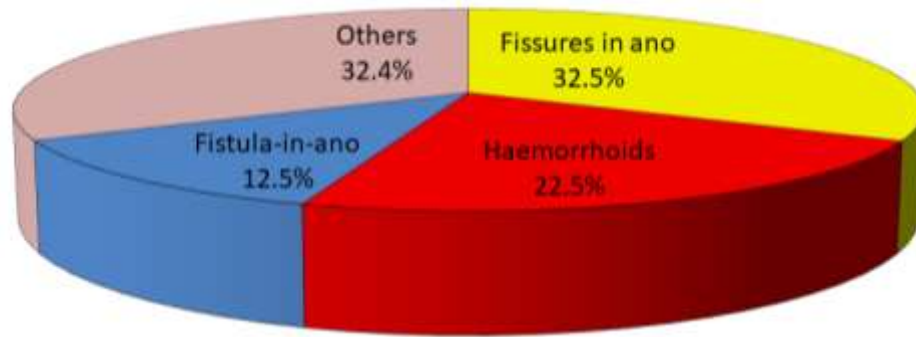


Fig. 5:- Age-profile of patients with different benign ano-rectal conditions.

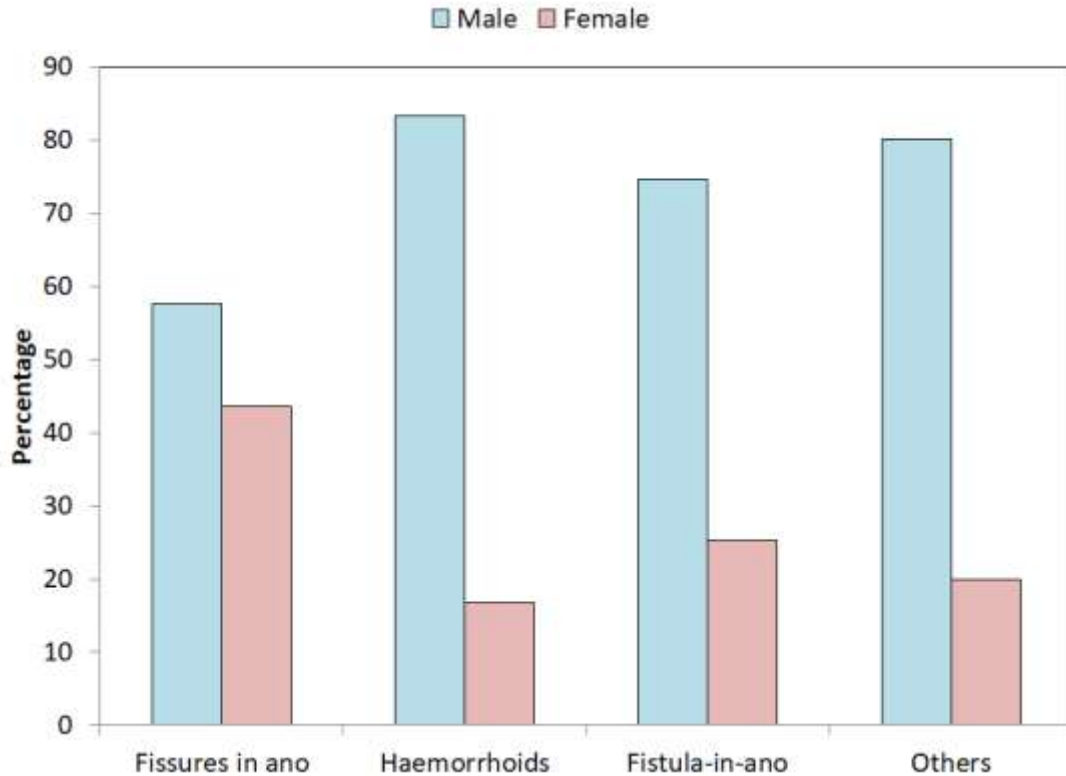


Fig. 6:- Sex-profile of patients with different benign ano-rectal conditions.

Discussion:-

In the present study, we found the incidence of anorectal conditions among patients visiting the surgical units of our facility as 21.1%, of these 95% were benign in nature. Thus nearly 20% of our total surgical patient turnover was from amongst benign anorectal diseases. Among patients with benign anorectal diseases, we found involvement of young males in the most productive years of their life (73.3% males; mean age 35.89 ± 12.73 years; most common age group 30-40 years). These findings are in agreement with the observations made by Sarla^[15] who in their study found a dominance of males (73.8%) in the age group 30-50 years (53.8%). In another study, Chaudhary and Dusage^[7] also reported the mean age of patients as 38.27 years which is quite close to the mean age of patients in the present study. They also reported a male dominance (69.6%). Although dominance of males was also reported in a study from Nepal^[16] that found 67% of patients as males but they reported the median age of patients as 45 years thus showing a dominance of mature adult males. The mean age of patients with benign anorectal conditions was reported to be above 40 years by Jain et al.^[17] too but he also found nearly two-third patients as males. As such it seems that the findings of the present study are in consonance with most of the other studies that show the mean age of patients between 30 and 50 years and a dominance of males.

In the present study, we found pain with constipation (82.3%), bleeding/pus discharge (77.3%) and itching (64.6%) were the most common presenting complaints among patients with benign anorectal diseases. In his study, Sarla^[15] also found pain, bleeding and discharge as the most common presenting symptoms of benign anorectal diseases. Chaudhary and Dusage^[7] also found bleeding with pain as the most common presenting complaint. In their study, constipation was also reported as one of the common presenting associated features (61.8%). However, in the present study, constipation and pain during defecation emerged as major presenting symptoms. Torunuetal.^[18] too similar to the present study found bleeding, anal pruritus and pain as the commonest presenting symptoms. In their study too, constipation emerged as a considerable feature in only 30.1% patients. In the present study, we primarily focused on the three most common presenting complaints.

As far as spectrum of benign anorectal diseases was concerned, in the present study, fissures in ano (n=2574; 32.5%) were the most common one followed by assorted conditions placed under others (abscess, pruritis, trauma)

category (n=2569; 32.4%), haemorrhoids (n=1784; 22.5%) and fistula in ano (n=994; 12.5%) respectively. Compared to the present study, Torunuetal.^[18] found hemorrhoids (64.6%) as the most dominant condition followed by anal fissures (15.4%) and dermatological disorders (4.6%) as the three most common benign anorectal diseases. However, Sarla^[15] found anal fissures as the most common benign anorectal condition (32.5%) followed by hemorrhoids (22.5%) and anal fistula (20%). Chaudhary and Dusage^[7] on the other hand found anal fissures in 17.8% of their patients. Haemorrhoids (31.2%) and anal fissure (28.7%) were the most prevalent anorectal disorders by Yadav et al^[16] in their study. In contrast, Jain et al^[17] found anal fissures (49%) as the most common condition followed by anal fistula (38%) and internal hemorrhoids (13%) respectively. It may be noted that spectrum of benign anorectal diseases shows a considerable difference in different studies. It must be noted that the present study is one of the largest series of benign anorectal diseases (n=7921) as compared to all these studies in which the sample size ranged from 100 to 629, thus presenting a most reliable spectrum of benign anorectal diseases from a North Indian population living in plains.

In the present study, mean age of patients in different ano-rectal conditions ranged from 31.62±12.98 years (haemorrhoids) to 41.38±11.74 years (Fissures in ano). We also found that for all the benign anorectal conditions, males were more commonly affected as compared to that of females. Highest proportion of males was seen in patients with haemorrhoids (83.3%) and lowest in patients with fissures in ano (57.6%). Similar to the present study, other workers also found a dominance of males in different benign anorectal diseases. Sarla^[15] also found age differences in different benign anorectal etiologies, with anal fistula being most common in patients aged 40-50 years while hemorrhoids being most common in age group 30-40 years. Jain et al^[17] also highlighted the differences in mean age of patients with different underlying anorectal etiologies and found mean age of patients with anal fistula, anal fissure and internal hemorrhoids to be 44.3, 41.8 and 55.8 years respectively. Interestingly, while the findings of the present study and that of Sarla^[15] show hemorrhoids to be more common in younger male adults, Jain et al^[17] found them to be more common in males aged >50 years. However, this difference could be owing to their focus on internal hemorrhoids only whereas in the present study both internal as well as external hemorrhoids were taken into account.

Conclusions:-

The present study analysed the spectrum of benign anorectal diseases in our facility and described their clinical and etiological profile. The incidence of anorectal conditions among patients visiting the surgical units of the facility was 21.1%. Benign anorectal conditions comprised 95% of total anorectal conditions seen. Young adults within 40 years of age were most commonly affected and there was a male dominance. Pain with constipation, bleeding including pus discharge and anal/perianal itching were the most common presenting complaints among patients with benign anorectal diseases. Fissures in ano (n=2574; 32.5%), haemorrhoids (n=1784; 22.5%) and fistula in ano (n=994; 12.5%) were the most common benign anorectal diseases.

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Declarations

Funding:

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Conflict of interest:

No Conflict of interest.

Ethical approval:

Clearance for carrying out the study was obtained from the Institutional Ethics Committee, Hind Medical College, Safedabad, Barabanki, Uttar Pradesh, India.

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