

Clinical Presentation and Management of Anorectal Abscess and Fistula-in-ano

Atul Agarwal¹, Sunil Kumar Bhat², Vijay Kumar¹, Bikramjit Singh Sodhi³

¹Assistant Professor, Department of Surgery, G. S Medical College and Hospital, Pilkhua, Uttar Pradesh, India, ²Senior Resident, Department of Surgery, GMC Jammu, Jammu and Kashmir, India, ³Senior Resident, Department of Surgery, G. S Medical College and Hospital, Pilkhua, Uttar Pradesh, India

Abstract

Introduction: Abscess and fistula-in-ano are diseases affecting mankind since early ages. Hippocrates in 450 B.C has called fistula-in-ano as liber de fistulis. The term fistula is borrowed from Greek meaning reed and from Latin where it means a pipe or a flute. It is defined as chronic granulating track connecting two epithelial surfaces. In this instance, the track connects the epithelial lining of the anus or the rectum and the perianal skin. It is an aphorism that any opening around the anal canal is an anal fistula unless proved otherwise.

Materials and Methods: The present study of 50 cases (25 patients of each of anorectal abscess and fistula-in-ano) was conducted at Government Medical College and Hospital Aurangabad between March 2003 and November 2005.

Results: Drainage of anal abscess with fistulotomy can be safely performed in cases of subcutaneous, intersphincteral or low transsphincteral fistulae with a minimal recurrence rate. However, drainage alone and posterior treatment of the fistula track is recommended for high transsphincteral or suprasphincteral fistulae.

Conclusion: Anorectal abscess are quite common in our society, and its early and proper management is very important for complete remission of the disease.

Key words: Abscess, Anorectal, Fistula, Remission

INTRODUCTION

Abscess and fistula-in-ano are diseases affecting mankind since early ages. Hippocrates in 450 B.C has called fistula-in-ano as liber de fistulis. The term fistula is borrowed from Greek meaning reed and from Latin where it means a pipe or a flute.¹⁻⁵

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Fistula is differentiated from a sinus which is a granulating track leading from the focus of suppuration to the surface, sinus in Latin means Bay or recess.⁶⁻⁹

A surgeon can treat this lesion successfully with proper knowledge of anatomy of the anal musculature, type of fistula, specific cause of fistula, and with the help of modern surgical procedures. Fistula-in-ano is notorious for its chronicity, recurrence, and frequent acute exacerbations.

Symptoms of an anal fistula are:

1. Discharge which soils the under clothes.
2. Irritation and itching of the skin around the anus.
3. Anal discomfort.

A fistula operation is not a major surgery, but it is far from being a minor one.¹⁰⁻¹⁴

The result of operation was not satisfactory in the past and number of them has been subjected to multiple operations.

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Corresponding Author: Dr. Vijay Kumar, Department of Surgery, H No B -79, Sector 47 NOIDA, Near Pupilcare Nursery School, Pin 201303. Phone: 9873297801. E-mail: Kumar.Vijay24365@gmail.com

It has been aptly said more reputations are lost in the treatment of fistula-in-ano than with any other operation the present study of 50 patients (25 each of anorectal abscess and fistula-in-ano) was conducted at Government Medical College and Hospital Aurangabad between March 2003 and November 2005.

Aims

1. To study the different clinical presentation of anorectal abscess and fistula-in-ano.
2. To study the etiology of an anorectal abscess and fistula-in-ano.
3. To study the management of anorectal abscess and fistula-in-ano.
4. To study the complications and outcome anorectal abscess and fistula-in-ano.

MATERIALS AND METHODS

The present study of 50 cases (25 patients of each of anorectal abscess and fistula-in-ano) was conducted at Government Medical College and Hospital Aurangabad between March 2003 and November 2005.

In every patient, detailed history and thorough physical examination was done.

Duration size and type of anorectal abscess were noted.

All the patients with fistula-in-ano were examined thoroughly for the number of external openings and their location as per the Goodsall's rule.

The position of internal opening was noted and the fistulae were classified in relation to anorectal ring.

Investigations such as routine hemogram blood sugar, stool examination, culture and sensitivity, and X-ray chest was done. ELISA for HIV 1 and 2 was done for all cases to rule out immunosuppression due to HIV infection.

Fistulography was done in five cases of suspected high anal fistulae and recurrent anal fistula.

All patients were subjected to operative procedure.

Histopathological examination of excised tracts was done in all cases of fistula-in-ano.

As per the histological examination reports, treatment was given along the established line.

All the patients were reexamined at the time of discharge and were followed in outpatient department regularly for

any complaints such as wound behavior, discharge, and recurrence from 1 month to 2 years.

Pelvic abscesses were excluded from the present study. There was no case submucous abscess in this study as it is difficult to diagnose and by the time patient presents to the surgeon, the abscess is already drained into the anal canal.

Observation

The present history of 50 patients (50 each of anorectal abscess and fistula-in-ano) was conducted at government medical college and hospital Aurangabad between March 2003 and November 2005.

Anorectal Abscess

Of 25 patients of anorectal abscess, there were 23 males (92%) and two females (8%). The most common age group was 21-30 years with eight patients (32%), followed by five patients (20%) in the age group of 31 = 40 years. There were four patients (16%) in the age group of 1-10 years, and two patients (8%) each in age group of 11-20 years, 41-50 years, 51-60, and >60 years.

Pain and swelling were most common complaints in all patients.

Pain along with fever in five patients (20%) was the presenting feature. There were signs of septicemia in two patients. Diabetes mellitus was associated risk factor in four patients (16%). Hemorrhoids and anal fissure were seen in three patients (12%). There was previous history of anorectal abscess in three patients. Of these 25 patients, 20 patients (80%) were having perianal abscess and five patients (20%) were having ischiorectal abscess. There was no case of submucous abscess 11 patients (44%) had right-sided abscess, 12 patients (48%) had left-sided abscess and two patients had horseshoe anorectal abscess. Cefotaxime was given as a pre-operative antibiotic in 15 patients (60%), ciprofloxacin and tinidazole combination was given in five patients (20%), ampicillin in four patients (16%), and cefepime in one patient. 24 patients (94%) were operated in general anesthesia and one patient under spinal anesthesia. For all patients incision and drainage by cruciate incision was done in lithotomy position. The amount of pus drained was 40-60 ml in 11 patients (44%), and maximum amount of pus drained was 200 ml. *Escherichia coli* was the most common organism seen in pus culture in 16 patients (64%). Followed by *Staphylococcus aureus* in five patients (20%) and remaining patients (16%) showed mixed culture. Anaerobic organisms were seen in four patients. There was wide variation in post-operative use of antibiotics by different surgeons. Cefotaxime alone was given to five patients (20%), cefotaxime along with tinidazole to five patients (20%). Ofloxacin, ornidazole combination was

given to three patients (12%). Ciprofloxacin and Tinidazol combination to 5 patients 20%. Ampicillin alone was given to four patients (16%). One patient was given cefepime as post-operative antibiotics. All patients received antibiotics for minimum period of 7 days.

Pain was the most common post-operative complication observed in 19 in patients (76%), followed by soakage in seven patients (28%), retention of urine in four patients (16%), and constipation in two patients (8%).

All patients were followed from 1 week to 1 year. 24 patients (96%) had healthy granulation at 1-week follow-up, and one patient had poor granulation. 22 patients (88%) had healed wound at 1-month follow-up while one patient developed fistula-in-ano and one patient had recurrent abscess.

At 3-month follow-up, 19 patients (76%) had healed wound while three patients had recurrent perianal abscess (12%) and three patients (12%) developed fistula-in-ano. At 1-year follow-up, 12 patients had completely healed wound and rest 13 patient lost in the follow-up.

Fistula-in-ano

Out of 25 patients of fistula-in-ano, there were 22 male patients (88%), and three were female patients (12%).

Maximum incidence was observed in 41-50 years (32%) of age followed by six patients (24%) in age group of 31-40 years. There were five patients (20%) in the age group of 51-60 years. None of the patients were above 60 years of age.

DISCUSSION

The present study comprising of 25 patients each of anorectal abscess and fistula-in-ano was conducted to evaluate different clinical presentation and management.

Anorectal Abscess

In the present study, there were 92% males and 8% females thus giving a male to female ratio of 11.5:1. Wilson 39 (1964) showed that the anorectal abscesses are twice more common in men as compared to women.

Goligher also found that anorectal abscess twice as common in the males as compared to females.

Mcdonald and Wilson (2003) showed a male to female ratio of 10.5:1. Our study showed high incidence in males as compared to females. In the present study, the most common age group was in third and fourth decade. Wilson showed that anorectal abscess presents in middle years of life. In the present study all patients had either pain or fever

as there presenting complain. Goligher also showed that clinical symptoms are pain and swelling in almost all patients.

Marcus *et al.* noted perirectal pain as the most common presenting symptom in 98.9% of the patients. In the present study, 16% of the patients had diabetes mellitus, 12% patients had hemorrhoids and anal fissure and 12% of the patients had previous history of anorectal abscess.

Goligher had also given hemorrhoids and anal fissure as the proven risk factors for anorectal abscess.

In the present study, 80% of the patients had perianal abscess while 20% of them had ischioanal abscess. There was no case of submucous abscess.

Goligher *et al.* studied 28 patients and found that 71%. Of the patients had perianal abscess and 29% of them had ischioanal abscess.

William also showed incidence of 60% perianal abscess and 30% ischioanal abscess. The present study was comparable with the studies done earlier.

Rusteikiena *et al.* found 68% patients having perianal abscess and 28.5% of the patients having ischioanal abscess. Cefotaxime was given as pre-operative antibiotic in 16% of the patients. All patients were operated under general anesthesia. Incision and drainage were done by cruciate incision in lithotomy position. An 11-week average amount of pus drained was 40-60 cc in about half of the patients. In the present study, *E. coli* was the most common organism found in 64% of the patients followed by *S. aureus* in 20%. Mixed culture and anaerobic organisms were seen in 4 (16%) patients. Brook and Itzhak showed *E. coli* in 20%, *S. aureus* in 34% and remaining of the patients showed mixed culture. William showed that pus culture from anorectal abscess yields mixed culture. There was a wide variation in post-operative use of antibiotics depending on the choice of the surgeons and different antibiotic combinations were tried. Cefotaxime alone was given to 20% of the patients, cefotaxime along with tinidazole to 20% of the patients, ofloxacin, and omidazole combination to 12% of the patients and ciprofloxacin and tinidazole combination to 20% of the patients. Ampicillin was given to 16% of the patients and one patient received cefepime as postoperatively. All patients received antibiotics for minimum period of 1 week.

Pain was the most common complication (76%) in immediate post-operative period followed by soakage in 28%, retention of urine in 16%, and constipation in of the patients. The present study was comparable to previous studies.

Fistula-in-ano

In the present study, there were 88% males and 12% females thus male to female ratio was 7:1.

Benett (1962) showed males having incidence of anal fistula twice more common than in females.

Marks and Ritchie did clinical study on 791 mm patients treated at St. Mark's Hospital London on fistula-in-ano and showed male preponderance with ratio of 4.62:1.

Misra and Kapur showed in their study male to female ratio of 7:1.

In the present study 72% of the patients were in the age group of 20-50 years with maximum number of patients in 5th decade. Benett (1962) in his study showed greatest incidence in 4th decade, the remainder being evenly distributed on either side in diminishing number.

Deshpande *et al.* showed in their study that 75% of the patients with fistula-in-ano were between 20 and 50 years of age. We found the same incidence in the present study.

Marks and Ritchie in their study at St. Mark hospital London found three quarters of the patients in both sexes were aged between 30 and 59 years and anal fistula were uncommon in both very young and very old patients.

In the present study, discharge was the presenting complaint in all patients followed by pruritus along with discharge in 40% of the patients.

Marks and Ritchie at St. Mark's hospital London showed that discharging sinus followed by pruritus was the presenting complaint in most of the patients.

Mangual and Tudu showed in their study. Discharge in all the patients and pruritus in 75% of the patients.

In the present study a previous history of burst anorectal abscess was seen in 80% of patients, 8% had recurrent fistula in another, 8% had repetitive diarrhea and 8% had diabetes. Chicken at St. Mark's Hospital London found in their study that 27% of patients had an anal abscess drained and 12% had a history of burst open anal abscess.

Misra and Kapur in their study showed history drainage of anorectal abscess in all the patients. There were recurrent fistulas in 13% of the patients.

In the present study, 88% of the patients had low fistula-in-ano while 12% had high fistula-in-ano.

Deshpande *et al.* encountered 60% low fistula and 23.5% high anal fistula in their study.

Mangual and Tudu showed prevalence of 65% or low and 35% of high anal fistulae.

Elsenhammer found that majority of fistulae (>90%) occur in the posterior half of anal canal. Misra and Kapur 1988 found in their study that 1609 of the patients had posterior external openings while 40% had anterior-external opening. They also found that 94.7% patients had single-external opening and 5.3% of the patients more than one-external opening. Mangual and Tudu found that fistulae were more common in posterior half (72.5%).

In the present study, 60% had right-sided fistula-in-ano and 28% had left-sided fistula-in-ano and 12% had horseshoe fistula-in-ano. Internal opening was palpable only in 44% of the patients. Misra and Kapur showed in their study that it was possible to negotiate the internal opening in 90% of the patients of fistula-in-ano and remaining 10% had internal opening either high up in the anal canal or it is blocked.

Exelyte an oral saline laxative (registered trade mark of Sterling laboratory marketed by USV limited) bowel preparation was given preoperatively along with cefotaxime to almost all the patients.

In the present study, fistulectomy with primary closure was done in 36% of the patients while fistulectomy with wound left open in 60% of the patients. Anal biopsy was taken in one patient (4%) of fistula-in-ano with carcinoma anal canal.

Histopathological examination showed chronic non-specific inflammation 24 patients and one patient had squamous cell carcinoma grade II.

Malignancy can develop in long standing fistula-in-ano and anorectal malignancies can also present with fistula-in-ano.

RESULTS

Drainage of anal abscess with fistulotomy can be safely performed in cases of subcutaneous, intersphincteral, or low transsphincteral fistulae with a minimal recurrence rate. However, drainage alone and posterior treatment of the fistula track is recommended for high transsphincteral or suprasphincteral fistulae.

CONCLUSION

Anorectal abscess are quite common in our society, and its early and proper management is very important for complete remission of the disease.

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