ORIGINAL ARTICLE

Factors Potentially Responsible for Recurrence of Fistula-In-Ano

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ABSTRACT

Aim: To find out factors potentially responsible for recurrence of fistula-in-ano in patients presenting at tertiary care hospital.

Study Design: Descriptive case series

Place and Duration: Study was conducted in the department of General Surgery at Liaquat Medical University Hospital Jamshoro for duration of six months from 1st July 2019 to 31st December 2019.

Methodology: 119 patients with recurrent anal fistula were included in this study. Brief history of duration of illness along with previous surgery and examination was carried out and specific investigations were advised if needed. All the patients had undergone surgical treatment. All potential factors responsible for recurrence were assessed. All this data was collected on a pre-designed proforma.

Results: The average age of the patients was 41.32±10.76 years. Complicated fistula tract was the most common causative factor i.e. 82.4% followed by inexperienced surgical hand 78.2%, Improper identification of tract 67.2%, Co-morbidities alongside anal fistula 41.2% and improper post-operative wound care 16.8%. Wound infection was observed in 21.61% (15/119) and anal incontinence 8.4% (10/119).

Conclusion: Complicated tracts (multiple & haphazard) was the most common factor responsible for recurrence of fistula-in-ano. We can conclude that proper assessment for diagnosis and appropriate management is the key to success. It not only reduces the complications but also improve the quality of life among these patient.

Key Words: Anal fistulae, anal discharge, perianal swelling, perianal pain, recurrent factors.

INTRODUCTION

Anal fistua is an abnormal track that is covered by both the epithelial and granulation tissue and is a communication between anal canal (primary opening) and perianal skin (secondary opening). [1] It is usually derived from an acute anal crypt infection which results in anorectal abscess. [2] Fistula-in-Ano can alsobe found in association with certain diseases like Crohn's disease, malignancy, radiation, trauma, foreign bodies or specific infections as tuberculosis, actinomycosis or Chlamydia.[3]

The symptoms and signs particularly observed in a patient of analfistulaare swelling, diarrhea, pain, the perianal discharge, bleeding, skin excoriationand external opening.[4]The fistula and abscesses usually come in same incidence in a given population with an estimated incidence of 1-2 in a population of 10,000. It is seen more frequently in males than females with a safe estimated ratio of 2:1.Usually the middle age i-e between 20-45 years is the common age of presentation.[5] Fistula in ano are divided as 'low' fistulae, which are usually described as trans-sphincteric or intersphincteric (fistulae that involves the bottom or lower third of sphincter complex). The other category is of 'high' fistulae. These are the remainig trans-sphincterицfistulae (in case a broader area of the external sphincter is incorporated), and also suprasphincteric and extrasphincterицfistulae.[6]

Colo-rectal practice is incomplete without fistula-in-ano. It's a troubling condition for patient and a time consuming task for surgeon since it involves the sensitive sphincter complex.[7] Preoperative thorough examination is very important which includes medical history and clinical examination. The patient's continence and any past history of surgery of ano-rectal region carries weight.[8] Imaging modality in management of perianal fistulae include Fistulography, EAUS (endoanal ultrasound) and computed Tomography (CT), however, have their limitations in assessing peri anal fistulae.[9] The disease extent and prognosis is better identified by use of MRI. It is a gold-standard investigation for this disease.[10] Surgery is the ideal way of treatment, with the target being draining the ultimate infection, removing the unneeded fistulous tract, and keeping hold of recurrent disease while persisting with an intact anal sphincter function.[11] A large number of surgical varieties are now available to chose from that include fistulotomy,, fibrin glue injection, fistulectomy, endorectal advancement flap, ligation of the intersphincteric fistula tract (known as the LIFT procedure) and seton drainage. [12]These procedures carry their particular recurrence risk and a certain level of incontinence.[13] In an international study the factors increasing the risk of anal fistula recurrence were categorised as factors associated with fistula anatomy and other co-morbidities, preoperative factors increasing the risk of recurrence, intraoperative incompetencies leading towards recurrence and factors related to post-operative complications.[14]

No local research has been conducted on this event, therefore this study has been planned to know the factors potentially responsible for fistula-in-ano. This study may provide knowledge regarding improved outcome of operated patients of anal fistula.

MATERIALS AND METHODS

This Descriptive Case Series study was conducted in the department of General Surgery at Liaquat Medical University Hospital Jamshoro for duration of six months from 1st July 2019 to 31st December 2019.. Total 119 patients of either sex who had previously undergone surgery for fistula-in-ano were included in this study. Newly diagnosed cases of fistula-in-ano, operated patients of fistula-in-ano later on diagonosed as cases of secondary fistula due to tuberculosis, and Crohn's disease or Colo-rectal malignancy patients were excluded.

Informed consent was taken. Brief history of duration of illness and examination was carried out and specific investigation was advised if needed. All the patients had undergone surgical treatment. Recurrent factors like nature of fistula (simple or complicated), type of fistula (low or high), inexperience surgeon & improper assessment of fistulous tract during surgery were assessed. After surgery patients were followed up on weekly basis for one months and then on monthly basis for next two months after surgery. All this data was collected on a pre-designed proforma.

All the data was entered and analyzed in SPSS 20 Version. Mean and standard deviation was calculated for quantitative variables like age and duration of disease. Frequency and percentage were calculated for qualitative variables like gender, clinical presentation, and potential factors responsible for recurrence.

RESULTS

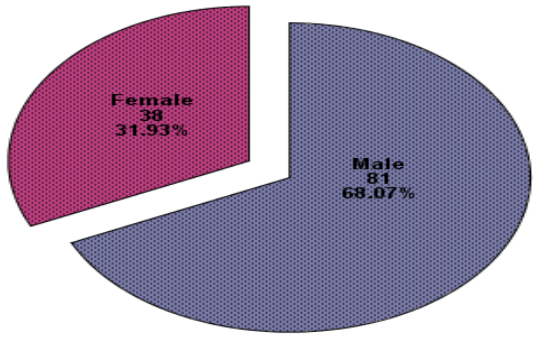
Mean age of the patients was 41.32±10.76 years. Majority of patients 39 (32.77%) were ages between 41 to 50 years followed by 27 (22.69%) were ages between 31 to 40 years, 27 (22.69%) patients had ages ≤30 years and 26 (21.85%) patients were ages between 51 to 60 years. (Table 1)

Table No 1: Age-wise distribution of all the patients

Variables	Frequency No.	%age
Mean age	41.32±10.76	-
≤30 years	27	22.69
31 to 40 years	27	22.69
41 to 50 years	39	32.77
51 to 60 years	26	21.85

There were 81(68.07%) male and 38 (31.93%) female as shown in figure 1.

Figure No 1: Gender-wise distribution



Frequency and factors of low anal fistulae is shown in table 2. Complex fistula tract anatomy (complicated & multiple tracts) was the commonest presentation that was observed in 82.4% followed by co-morbidities alongside anal fistula78.2%, improper identification of tract 67.2%, inexperienced surgical hand 41.2% and improper post-operativewound care 16.8%.

Table No 2: Frequency of Clinical Presentation of Recurrent Anal Fistula

Clinical Presentation	Frequency	Percentage
Complex fistula tract anatomy	98	82.40%
Inexperienced surgical hand	49	41.20%
Improper identification of tract	80	67.20%
Co-morbidities alongside anal fistula	93	78.20%
Improper post-operative wound care	20	16.80%

DISCUSSION

Anal fistua is an abnormal cavity that is covered by both the epithelial and granulation tissue and is a communication between anal canal (primary opening) and perianal skin (secondary opening). [1] It is usually derived from an acute anal crypt infection which results in anorectal abscess. The term fistula in Greek language means reed, while in Latin it defines"flute". [15, 16] With proper knowledge of complex anal region antomy, proper information regarding different types of fistula and with a thorough examination, a surgeon can easily root out this disease and prevent complications. Fistula-in-ano is widely known for its chronic character, recurrence, and frequent acute attacks. Most fistulas take their origin fromcryptoglandular infection resulting acutely in the form of perirectal abscess. The abscess actually portrays the event of acute inflammation, while thefistula represents chronic process. Symptoms generally affect the normal life of patient significantly, and they have a wide range from a minute drainage to a chronic sepsis. To find out factors responsible for recurrent anal fistula.A total of 119 patients of either sex between the ages of 18-60 years with low type fistulae were included in this study. In this study, mean age of the study subjects was 41.32±10.76 years. In a study by Sidhdharth R et al, nearly similar findings were noted.[17]Sainio P also in their study in decade of 80's of twentieth century reported mean age of subjects with fistulae to be 38.5 years.[18]Hamadani A et al have shown more than two-fold increased risk of recurrence in patients < 40 years versus those with age ≥ 40 years.[19] In another study by Kumar V et al, maximum 74 subjects were found to be present in age group 31-60 years. [20]. In this study 81(68.07%) male and 38(31.93%) females showing greater incidence in male population. In study by Sidhdhartha R et al, gender incidence for anal fistula was found to be higher in male subjects with 76% of subjects being male and rest 24 % being female. [21] In a study by Kumar V et al the female subjects were further less with only 8% subjects being female and gender ratio being 11.5:1.[22]A large number of patients of fistula are middle-aged and it is less common after the age of 60 .[23]

Regarding the factors responsible for recurrent fistula study, complex ana fistula tract was the commonest factor observed in 82.4% followed by inexperienced surgical hand 78.2 %, improper identification of tract 67.2%, co-morbidities alongside anal fistula 41.2% and improper post-operative wound care 16.8%.

Treating anal fistula is an arduous task as its anatomical region is both complex and sensitive and is associated with life troubling complications post-operatively like incontinence and recurrence. Although the main concern behind operative intervention is to heal the fistula, the morbidity of procedure also carries weight. In a study by Raj Siddhartha et al 6% patients had recurrence while Kumar et al reported 2% recurrence. [24]In a study by Sangwan YP et al, 20% of all recurrent fistulas were found to be due to inappropriate excision of fistulous track.[25]

CONCLUSION

Anal fistula is a common disease occurring more in young males than in females. It is devastating to the patients and imposes challenges to the surgeon. Our results conclude that complicated fistulous tracts (multiple tracts with haphazard pathway) was the most common factor in recurrence of anal fistula. Other factors like inexperience of surgeon, any additional co-morbidities & post-operative wound care also carry their due weightage.We can conclude that prompt diagnosis and its management accordingly is the fortunate way of dealing with fistula-in-ano. It not only reduces the complications but also improve the quality of life among these patient.

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