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Original Research Article

Prevalence of fistula-in-ano in patients attending tertiary care institute of Gujarat: a cross-sectional study

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ABSTRACT

Background: Present research was done to study the evidence, etiology signs, symptoms, pathogenesis and management and follow up of the patient for a period of 6 months after surgery.
Methods: This was a clinical study of fistula in ano done at medical institute for the period of 1 year. 50 cases, clinically diagnosed, fistula in ano were selected randomly utilizing the closed envelope method and studied. Clinical examination including per rectal and proctoscopic was done in required patients. Patients were treated with fistulectomy or fistulotomy for fistulae. Patients were followed up for a period of 3 months to 1 year.
Results: In this present series, 44% of patients were in the age group of 31-40 years. 70% of patients were, discharging wound was the presenting the complaint. 20% of patients with pain and swelling around the anal region. In the study of 50 cases were randomly selected patients of fistula in ano, 84% of them had only one external opening, while 10% had 2 external opening and another 6% had more than 2 openings, hence fistula in ano with a single external opening is commonest in occurrence.
Conclusions: On the basis of observations, we can conclude that early diagnosis and appropriate management is the key to success. It not only reduces the complications but also improve the quality of life among these patients.

Keywords: Anal fistula, Discharge, External opening, Rectum

INTRODUCTION

Anal fistula is a chronic irregular communication between the epithelialised surface of the anal canal and typically the perianal skin.[1] An anal fistula can be describe as a fine tunnel with its internal opening in the anal canal and its external opening in the skin near the anus.[2] Anal fistulae frequently occur in people with a history of anal abscesses. They can form when anal abscesses do not heal correctly.

The most common reason is nearly all the time by a previous anorectal abscess. There is usually a history of recurring abscess that ruptured spontaneously or was surgically drained.[3,4] The occurrence of such abscess is typically secondary to infection of an anal gland An anal abscess is an infected cavity filled with pus found near the anus or rectum. Ninety percent of abscesses are the outcome of an acute infection in the internal glands of the anus. Infrequently, bacteria, fecal material or foreign matter can clog up an anal gland and tunnel into the tissue around the anus or rectum, where it may then gather in a cavity called an abscess.

Normal anatomy includes small glands just inside the anus. The fistula is the tunnel that forms under the skin and connect the clogged infected glands to an abscess. A fistula can be present with or without an abscess and may connect just to the skin of the buttocks near the anal opening.

Just inside your anus are several glands that create fluid. Every so often, they get blocked or clogged. When that happen, a bacteria buildup can create a swollen pocket of infected tissue and liquid. Doctors call this an abscess. If you don't treat the abscess, it'll cultivate. Ultimately, it'll make its way to the outside and punch a hole in the skin somewhere near your anus so the gunk inside it can drain. The fistula is the channel that connects the gland to that opening.

Most of the time, an abscess causes a fistula. It's uncommon, but they can also come from conditions like tuberculosis, sexually transmitted diseases, or an uncompleted illness that affects your bowels.

The majority of these infections are acute and significant minority is contributed by chronic, low grade infections, hence pain being to varying etiologies. The common pathogenesis however is the spastic open of an acute or insufficiently treated ano-rectal abscess into the peri-anal skin.

Anal fistulae per se do not generally damage but can be very painful, and can be irritating because of the drainage of pus. Additionally, recurrent abscesses may lead to significant short term morbidity from pain and, importantly, create a starting point for systemic infection.

Since the day of disease, it was treated by surgery. With the recent clear awareness of the relations of the fistula with anal sphincters, the surgical treatment has become easier. Usually the fistula-in-ano excised and kept open to heal by granulation tissue. This procedure takes long period to heal completely.

Digital rectal examination remains the chief stay of diagnosis in anorectal fistula cases.[4] usually done investigations in fistula-inano are sigmoidoscopy, colonoscopy, fistulography, endo anal/endorectal ultrasound, magnetic resonance imaging (MRI), computerized tomography scan (CT scan), a barium enema/small bowel series, fistuloscopy.[5] But thorough physical examination is most needed. Fistula-in-ano one of common peri-anal disorder and there is scarcity of studies on its incidence, prevalence, etiopathogenesis, clinical features especially in this part of the country. Hence the present research was done to study the evidence, etiology signs, symptoms, pathogenesis and management and follow up of the patient for a period of 6 months after surgery.

METHODS

This is a clinical study of fistula in ano done at Department of Surgery, Gujarat Adani Institute of medical science from July 2017 to August 2018 for the period of 1 year. Fifty cases, clinically diagnosed, fistula in ano were selected randomly utilizing the closed envelope method and studied.

Inclusion criteria were: History of perianal discharge/discharge from the external opening-persistent seropurulent/fecal matter cautilizing pruritus and discomfort in the perianal region. Recurrent fistula after previous fistula surgery.

Exclusion criteria were patients who present with fistulas which are precise to certain systemic disease clinical history was recorded in all the patients. Clinical examination including per rectal and proctoscopic was done in required patients. All the patients were processed by routine investigations, ECG, chest, X-ray, etc. done prior to surgery. Fistulogram was done in selected cases. Patients were treated with fistulectomy or fistulotomy for fistulae. Patients were followed up for a period of 3 months to 1 year.

RESULTS

There were 50 cases of fistula in ano were selected and following results were obtained. In this present series, 44% of patients were in the age group of 31-40 years another 30% of patients were in the age group of 20-30, 20% of patients were in the age group 41-50 years, 6% of patients were in the age group of above 51 (Table 1). In this present series 76% of patients were males and another 24% of patients were females so the ratio is 4:1 (Table 2).

Table 1: Age wise distribution of study participants.

Age in years	Numbers	Percentage (%)
20-30	15	30
31-40	22	44
41-50	10	20
>51	3	6

Table 2: Gender wise distribution of study participants.

Gender	Number	Percentage (%)
Male	38	76
Female	12	24

In the study, 70% of patients were belonging to lower socio-economic class and another 30% of patients were from higher socio-economic class (Table 3). This difference due to the fact that majority of the patients to attend the hospital are from a lower socio-economic class.

Table 3: Socio-economic status of the study participants.

Socio-economic status	Number	Percentage (%)
Low-socio-economic status	35	70
High-Socio-economic status	15	30

In this series 70% of patients were, discharging wound was the presenting the complaint. 20% of patients with pain and swelling around the anal region, past history of peri anal abscess obtained from 80% of cases from this facts we note that discharging wound and pain, and past history of peri anal abscess are the commonest mode of presentation in the majority of patients (Table 4).

Table 4: Mode of presentation in the study participants.

Mode of presentation	Number	Percentage (%)
Discharge	15	70
Pain and swelling	10	20
Peri anal irritation	5	10
Past h/o peri anal abscess	40	80

Table 5: Number of external opening in study participants.

Number of external opening	Number	Percentage (%)
1	42	84
2	5	10
>2	3	6

In the study of 50 cases were randomly selected patients of fistula in ano, 84% of them had only one external opening, while 10% had 2 external opening and another 6% had more than 2 openings, hence fistula in ano with a single external opening is commonest in occurrence (Table 5).

In the study of 50 cases were randomly selected patients of fistula in ano, 84% of patients underwent fistulectomy, another 10% of patients fistulotomy and another 6% of patients fistulectomy with lateral sphinctorotomy (Table 6).

Table 6: Situation of external openings in study participants.

Situation of external openings	Number	Percentage (%)
Anterior	8	16
Posterior	42	84

Table 7: Level of fistula in study participants.

Level of fistula	Number	Percentage (%)
Lower level of fistula	44	88
Higher level of fistula	6	12

In this study 88% of patients had low level fistula and another 12% of patients had internal opening situated above the ano rectal ring (Table 7). In the study of 50 cases were randomly selected patients of fistula in ano, 84% of patients underwent fistulectomy, another 10% of patients fistulotomy and another 6% of patients fistulectomy with lateral sphinctorotomy (Table 8).

Table 8: Types of surgical treatment in study participants.

Types of surgical treatment	Number	Percentage (%)
Fistulectomy	42	84
Fistulotomy	5	10
Fistulectomy with lateral sphinctorotomy	3	6

DISCUSSION

Fistula-in-ano is one of the most ordinary benign colorectal diseases, with significant risk of morbidity and recurrence. Factors identified for recurrence of fistula are technical difficulties in preoperative evaluation, missing the right tract or additional tracts during surgery, complex type of fistula, lack of recognition of internal fistulous opening, previous fistula surgery, treatment of etiological factors or pathology and lack of proper follow up.[6-8]

In the present study, mean age of the study subjects was around 40 years. In a study by Sidhdharth et al, nearly similar findings were noted.[9] Sainio also in their study in decade of 80's of twentieth century reported mean age of subjects with fistulae to be 38.5 years.[10] Hamadani et al have revealed more than two-fold increased risk of reappearance in patients <40 years versus those with age ≥40 years.[11] In another study by Kumar et al, maximum 74 subjects were found to be present in age group 31-60 years.[12]

In this study 76% subjects were found to be male and 24% subjects were female. In study by Sidhdhartha et al, gender incidence for anal fistula was found to alike in male subjects with 76% of subjects being male and rest 24 % being female. In a study by Kumar et al the female subjects were less with only 8% subjects being female and gender ratio being 11.5:1.[13] there is a further male dominance in reported series. Kim et al reported the male: female of 4.6:1 in Korea.[14] 70% Patients had perianal discharge while 10% patients presented with perianal pain. 80% patients had history of perianal abscess. In a study by Siddhartha et al 72% patients' pain around the anal region, discharging wound was the presenting complaint in 70%, of the patients. Acute perianal fistulae typically present with new onset of pain and swelling in the affected area. The pain is provoked by movement and defecation and occasionally even coughing or sneezing. A clinical history may also disclose an antecedent bout of diarrhoea. In a study by Kumar et al also discharge and external opening were the commonest complaint and were present in all subjects (100%). But the findings were included both as symptoms and signs so there is risk of interpreting them falsely raised as symptoms.

There were 84% patients had single opening while 10% patients had 2 external opening and rest 6% patient had multiple external opening indicating that single opening is more ordinary. Sidhdartha et al observed that 76% of then had only one external opening while 12% had 2 external opening and another 12% had more than 2 openings. Here also fistula in ano with a single external opening is commonest in occurrence.[10]

There were 84% patients had posterior opening while 16% patients had anterior opening. In a study by Siddhartha et al 80% of patients posterior opening and 20% of patients anterior opening, so posterior situation was more common which in accordance with our findings.[10]

In a study done by Marks and Ritchie, the site of internal opening is anterior, posterior and lateral and in a study by Kumar et al anterior in 24%, posterior in 77% and lateral in 10%, is also in accordance with the present study.[13,17]

In this study 88% patients had low type of fistula i.e. internal opening below the anorectal ring, while 12 % had high type of fistula. So low type fistula is more widespread in study by Kumar et al fistula was found to be high in only 4% subjects and low in 74%.[17] In a study by Siddhartha et al also 88% of patients had low level fistula and another 12% of high level fistulae. Patients had internal opening situated above the ano rectal ring.

In a study titled fistula-in-ano. Fistulectomy was performed in 84% subjects, fistulotomy was performed in 10% subjects, fistulectomy with lateral sphinctorotomy was performed in 6% subject. Kumar et al fistulectomy was performed in 68% subjects, fistulotomy in 28% subjects and seton placement in 4% subjects.[13]

CONCLUSION

Anal fistula is a widespread disease which is overwhelming to the patients and imposes challenges to the surgeon. On the base of observations, it was conclude that premature diagnosis and suitable management is the key to success. It not only reduces the impediments but also advance the quality of life among these patients.

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REFERENCES

1. Rob C, Smith R, Morgan SCN. Clinical surgery: Abdomen and rectum and anus. Clinical surgery: Abdomen and rectum and anus. London: 1966.
2. Alan M. Cuthbertson, Sir Edward Hughes, Mark K. Killingback-Ano recta suppuration II anal fistula colorectal surgery, Churchill Livingstone; 1983:142-162.
3. Babu AK, Naik MB, Babu MR, Madhulikia M. Seton - as a gold standard treatment for high fistula in ano. J Evidence Based Med Healthcare. 2015;2(11):1687-93.
4. Russel TR. Anorectum. In: Lawrence W, eds. Current surgical diagnosis and treatment. 10th ed. McGraw-Hill Companies; 1994.
5. Adams D, Kovalcik PJ. Fistula in ano. Surg Gynecol Obstet. 1981;153:731-2.
6. Isbister WH. Fistula in ano: a surgical audit. Int J Colorectal Dis. 1995;10(2):94-6.
7. Parks AG. Pathogenesis and treatment of fistuila-in-ano. Br Med J. 1998;1(5224):463-9.
8. Panda UN. Current Medical Diagnosis and Treatment. Jaypee Brothers Publishers; 2002.
9. Siddharth R, Kumar GA, Sreedhar S. Clinical study of fistula in ano. J Evol Medical Dent Sci. 2015;4(86):15082-87.
10. Sainio P. Fistula-in-ano. Clinical features and long-term results of surgery in 199 adults. Ann Chir Gynaecol. 1985;151(2):169-76.
11. Hamadani A, Haigh PI, Liu IL, Abbas MA. Who is at risk for developing chronic anal fistula or recurrent anal sepsis after initial perianal abscess? Dis Colon Rectum. 2009;52(2):217-21.
12. Kumar VH, Chetan PR, Naveen PR. A clinico-pathological study of fistula-in-ano. Sch J App Med Sci. 2015;3(3):1471-6.

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