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ORIGINAL ARTICLE

NEW APPROACH TO ANORECTAL SINUS DISEASE

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ABSTRACT: AIM: Retrospective analysis of 23 cases of persistent ano-rectal abscesses and fistulas with an unusual clinical presentation (absent external opening in all cases) resulting in modification of treatment modalities to prevent the dreaded complications of recurrence and incontinence. **METHODS:** 23 patients presenting with ano-rectal sinus disease from January 2012 to June 2013 were retrospectively reviewed. Patients were collected from two different institutions of Kanpur. Intra-operatively the probe was introduced from the internal opening and extended outwards towards the skin taking the shortest route followed by incising the tip of the probe. This converted the sinus tract into a fistula after which either of the two techniques was employed: (a) Surgery (fistulotomy) alone in cases where small chunk of sphincteric muscle mass was to be cut. Here the internal opening was below the ano-rectal ring. (b) Surgery along with placement of kshar-sutra in cases where internal opening was too near to the ano-rectal ring or above it. Sphincteric part of the tract was saved from cutting by encircling it with kshar-sutra during surgery. **RESULTS:** All our patients had symptomatic relief and we achieved complete healing of the wound in all of them with no incidence of persistence of the disease after six months of follow-up, no incidence of recurrence and no incidence of anal incontinence. **CONCLUSIONS:** Thorough clinical examination resulted in identifying the peculiarity of our cases and also helped us in establishing the etiological factors along with the involved anatomy. Special procedure adopted in our study helped us in preventing complications and ensuring complete healing of the wounds.

KEYWORDS: recurrent ano-rectal abscess, fissure abscess, fistulotomy, pectinate line, ano-rectal ring, kshar-sutra.

INTRODUCTION: More than 95% of all ano-rectal abscesses are caused by infections arising in the anal glands that communicate with the anal crypts (cryptoglandular disease).[1, 2] As the abscess enlarges, it escapes the confines of the inter-sphincteric plane and spreads in any one of several possible directions. The most common of all ano-rectal abscesses is a peri-anal abscess, which presents as a tender, erythematous bulge at the anal verge. Incision and drainage alone will result in complete resolution of the infection in about half of patients.[3] The drainage should be performed as close to the anus as possible to shorten the length of any possible subsequent fistula tract. In addition to adequate drainage, one should endeavour to prevent acute recurrence of an abscess by either excising the overlying skin, inserting a drainage catheter, or placing a loose seton.[3, 4]

Acute abscesses recur in about 10% of patients and in about 50% of patients, an anal fistula occurs, which consists of a chronically infected tract with an internal opening located in a crypt at the level of the dentate line, and an external opening located at the drainage site of the earlier abscess. The appropriate treatment for an anal fistula is dependent upon the anatomy and the location of the fistula tract.[5, 6, 7]

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According to the literature peri-anal sinus means a blind cavity in the perianal area with an opening on the peri-anal skin surface and having no luminal connection. Once it establishes a luminal connection we call it a fistula. In the present study we have selected cases where the external opening was not seen. Mostly these patients present with purulent discharge from the anal opening – spontaneous or on pressing over the corresponding perianal area. These cases are interesting and challenging to the surgeon diagnostically and management wise. Treatment is tricky and requires good expertise. Present study evaluates causes, clinical features and a new approach to the treatment adopted by our team.

MATERIAL AND METHODS: Twenty three patients with symptomatic ano-rectal abscess/ fistula/ sinus with an internal opening below, at or above the ano-rectal ring and an absent external opening on the skin surface were retrospectively studied. They presented with purulent discharge from anal canal, peri-anal pain and tenderness, sometimes bleeding per-rectum. All of them were subjected to a thorough local examination in the form of peri-anal inspection and DRE followed by general and systemic examination. Anoproctoscopy for ano-rectal inspection and sigmoidoscopy to exclude lesions higher up was done in all the patients. Routine pre-operative investigations were done in all cases. Patients having sinus opening on the skin surface, complete fistulas and malignancies were excluded from the present study.

In all the patients a definite pre-operative preparation was done according to the hospital protocol, with a definite pattern of post operative care. Preoperatively liquid diet for two days, laxatives a night before and enema 6 hours prior to surgery was given to all the patients. Each patient was taken up for surgery after pre-anaesthesia clearance. Spinal anaesthesia was given and patient was placed in the lithotomy position. Four fingers anal dilatation was done for every patient. Sinus opening was probed to reach the floor of the cavity. Tip of the probe was pushed outward and a nick was given on the skin surface to deliver the tip of the probe out.

By this method the sinus was converted into a fistula. After this step basically two distinct treatment modalities were adopted- (a) Surgery (fistulotomy) alone – first convert the sinus into fistula and then lay open the tract over the groove of the probe. These were the cases where sphincteric chunk was little and cutting them had no risk of incontinence. (b) Surgery along with kshar-sutra placement- first the abscess cavity was converted into a fistula by giving a nick over the tip of the probe on the peri-anal skin, cavity was opened and drained, and finally the sphincteric part of the sinus along with the internal opening was encircled with kshar-sutra loosely to prevent cutting of the sphincteric muscle. The wound was packed with aseptic gauge and a sterile dressing was applied.

Post operatively sitz bath was given two to three times a day from the first post-operative day, application of povidone ointment locally was done and the wound was covered with a sanitary pad. To retain the pad over the wound tight fitting undergarments were given, with change of pads as and when required. Wound assessment was done on every 5th day and in case kshar-sutra was used, it was changed on that day. Once the cavity healed from the floor and walls all around, we started tightening the kshar-sutra every 5th day. This process helped in slowly cutting and healing of sphincter by fibrosis. This process was continued till the entire sinus tract healed up by cutting through.

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Two weekly visits were continued for next 2 months and then once a month for the next 3 months. Assessment of outcome was done at the end of six months from the date of surgery.

All follow up results were classified into two groups (a) treatment failure- where the symptoms recurred (b) relieved- where patients became asymptomatic / cured.

All parameters were recorded in a pre-designed proforma and data analysis was done.

RESULTS: Out of 23 cases, 17 were males and 6 females (m: f =3:1). Age of the patients ranged from 27 to 65 years with a mean age of 43 years. Commonest symptoms were pus discharge from anus (100%), peri-anal pain and tenderness (100%), bleeding per-rectum (23%) cases.

Relative contraindications to surgery/anaesthesia were present in 5 patients of whom two had severe anaemia due to persistent bleeding per-rectum, two patients had COPD and one patient had severe uncontrolled hypertension. These patients were taken up for surgery after optimization of their health in consultation with internal medicine and anaesthesia specialists.

Three etiological groups emerged:

1. 8 patients (6 males & 2 females) had chronic fissure at 6 o'clock position with an opening at the roof of the cavity having pus discharge into the anal canal.
2. 10 patients (8 males & 2 females) had a primary ano-rectal abscess with pus cavity opening into the ano-rectal lumen below, near or at the ano-rectal ring.
3. 5 patients (3 males & 2 females) were those who developed sinus post operatively after fistula surgery and later presented with persistent purulent discharge per anus.

Surgery that is fistulotomy alone was performed in 8 patients (those associated with chronic fissures) and surgery with kshar-sutra placement was performed in 15 patients (those patients who had a primary ano-rectal abscess which failed to heal completely and those patients who underwent a fistula surgery elsewhere). The decision to place kshar-sutra was based on the extent of involvement of the sphincter muscle complex.

Assessment at 6 months follow up revealed the following facts:

1. All patients had symptomatic relief in the form of absent pus discharge, no local pain or tenderness and no bleeding per-rectum.
2. None of the patients had anal incontinence for either stools or flatus.
3. Local examination revealed complete healing of the wound, with no external opening.
4. DRE revealed no tenderness or pus discharge or any induration in the anal canal.
5. Anoproctoscopy showed no signs of inflammation or presence of any internal opening.

DISCUSSION: It is not uncommon for patients to present with complaints of long-standing pus discharge through anal opening. Such cases usually have an identifiable external opening with or without an internal opening in the anal canal/rectum.[3] Our series consisted of patients who had a definite abscess cavity in the ano-rectal area but no identifiable external opening. 74% of our patients were males with a mean age in the fourth decade establishing again that the disease is more common in males in their 3rd, 4th or 5th decades. 18 out of 23 patients had a primary pathology either in the form of a chronic fissure which failed to heal and later presented with a persistent abscess (8

patients) or in the form of a primary anal abscess which developed into a fistula due to inadequate healing where the external opening got obliterated over time (10 patients). Five of our patients presented to us because of inadequate surgical management of fistula-in-ano offered elsewhere which resulted in a persistent anal fistula where the external opening had epithelised over time.

These patients pose a definite clinical peculiarity as they do not present with features typical of either a peri-anal abscess or of an anal fistula/sinus. We examined these cases thoroughly to first establish the diagnosis and then to determine the etiology behind their origin. Definite treatment policy was then evolved to achieve the best possible results. Our aim was to achieve a continent status after the surgical treatment of such patients. Peri-anal sinus as described in the text books has a blind tract in this area with an opening outside on the skin which pours pus.

It fails to demonstrate any luminal connection. In such situations correlating its origin from luminal side seems to be superfluous. Any abscess or tract originating from anal gland or lumen must demonstrate an internal opening. In our series of patients, a definite internal opening was demonstrated but there was no external opening. During surgical treatment these incomplete tracts were converted into fistula first and then two modalities of treatment were adopted to complete the surgery- one without the use of kshar-sutra and other with the use of kshar-sutra based on the involvement of the sphincter complex. Combined modality of treatment prevented the unnecessary mutilation of the sphincter muscle complex and ensured slow and complete healing of the iatrogenically created fistula tract.[8, 9, 10, 11]

CONCLUSION: Ano-rectal sinus disease as such is a neglected subject and less talked about because of its complexity. Since fistulous tracts and sinuses traverse the sphincteric muscle mass, their cure lies in laying open the tracts completely. This can lead to sphincteric injury and subsequently incontinence. In the present study we were able to establish the etiological factors in each of our patients that helped us in understanding the local anatomy better. We could establish that these cases were different from usual peri-anal abscess, fistulas or sinuses (those with an external opening) and each case had to be treated according to its etiology and the involved anatomy. The combined use of surgery and kshar-sutra resulted in complete healing and prevented complications like recurrence and incontinence.[11]

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