Austin Surgery Case Reports

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Case Series

Pilonedal Fistulae; Three in One Technique for Surgical Management Three Case Reports

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Received: February 11, 2019; **Accepted:** March 14, 2019; **Published:** March 21, 2019

Abstract

Pilonidal sinus is well-recognized chronic inflammatory condition, mostly in sacrococcygeal area. Pilonedal fistula is a rare variety of pilonidal sinus with extension of the disease to the anal canal. Three cases of pilonidal fistula were reported. Endo-anal ultra sound was done in the three cases. It demonstrated that the disease opened in anal canal at dentate line at 6th. O`clock. All patients started at sacorcoccygeal area then extended to the anal canal. The connection to the anal canal makes the conservative treatment unreliable in these cases. The management is very challenging because of many factors including; the sphincter, liability of contamination & recurrence, as well as long time for healing and complain from the size of the wound. The study provides three in one technique for better results and less patients suffering. It entails meticulous excision of the fistula and closure of the wound by three different methods; closure in layer proximally, marsupialization in the middle part and left open (fistulotomy) in the distal anal part. The cases reported short time of healing of approximately forty days, good sphincter function and no recurrence. This method of closure seems to be good & promising method in dealing with such special entity but need more case to be evaluated well.

Keywords: Pilonidal fistula; Extensive pilonidal disease; Unusual pilonidal site; Rare pilonidal varieties

Introduction

Pilonidal sinus is a relatively common disease [1], that occurs mostly in the sacro-coccygeal area, with an incidence of approximately 0.7% [2]. Rarely, the disease extends to the anal canal forming a pilonedal fistula. This variety of the disease represents a real challenge in its management in term of period of healing, liability for wound dehiscence, infection, recurrence rate & the functional outcome of the anal sphincter.

Patients and Methods

Three cases of pilonidal fistula were reported (Figure 1,2). Assessment of the history, gender, age, duration of complains was done. Endoanal ultrasound was done in all cases demonstrating low posterior connection to the anal canal (Figure 3). Conservative measures were used initially to treat the acute inflammatory state, and then surgery was done in all patients. Patient put initially in lithotomy position then turned prone to complete the procedure. This was done in the first case but later on prone position was done from the start. Assessment of the anal extension of the fistula was done followed by fistulotomy, then layout of the sinus & excision of the proximal part with meticulous follow up of side branches. The resulting wound was divided into three parts in its closure shown in Figure 4. An elliptical excision was done in the proximal sacral (vertical part) with some eccentricity as much as possible to be like Karydakis technique. The distal (perineal) part left opened by doing fistulotomy. The middle coccygeal part of the wound which overlies the coccyx marsupialization was done to be a transitional zone between the closed proximal part & opened distal fistultomy part. The study assessed the healing period, occurrence of complications & recurrence.

Results

The three cases were male, with the mean age was 24 years. All cases started as at usual sacrococcygeal area then extend to the anal canal. The minimum duration of complain was approximately eight months with an average of fourteen months. Endoanal ultrasound was done in all cases. All fistulae were low anal fistula opened at 6th. O`clock, except one case opened at 5th to 6th. O'clock shown in Figure 3. The mean operative time was forty minutes. The average period of healing was forty days, with no recurrence reported. The minimum period of follow up was one year. The anal sphincter was good with no incontinence reported.

Discussion

Pilonidal sinus is a well-recognized chronic inflammatory condition, that presents as a sinus containing hairs [3]. It was first reported by Mayo in 1833, then described by Anderson in 1847 as a hair detected in a sacrococcygeal ulcer and later named pilonidal sinus by Hodges in 1880 from its Latin origins [4]. Pilonedal fistula is a rare variety of the disease characterized by the extension of the disease to the anal canal and hence it become termed fistula. The surgical management of sacrococcygeal pilonidal sinus is still a matter of discussion [5]. The condition becomes more difficult & complex when anal extension developed [6]. This was challenging in many issues. This variety represents an extensive disease. Its connection to the anal canal which provides a continuous source for infection adds more burdens for original pilonidal disease. It makes the role of conservative measures that may be used in the original form,

Citation: Elsaady A. Pilonedal Fistulae; Three in One Technique for Surgical Management Three Case Reports. Austin Surg Case Rep. 2019; 4(1): 1028.

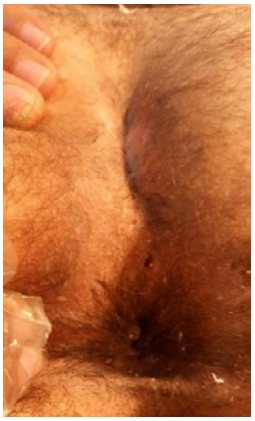

Figure 1:

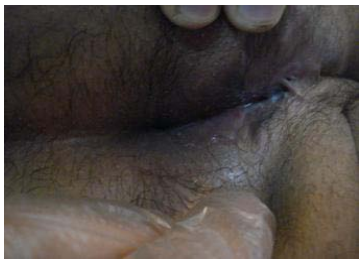

Figure 2:

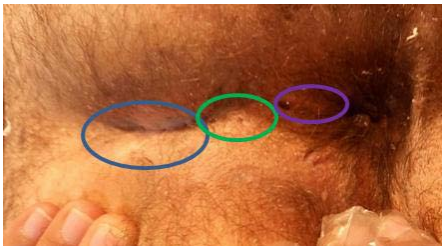

Figure 3:

has a very limited role. Moreover, the surgical procedure used for correction of this disorder has higher incidence of infection by this connection to the anal canal. This is especially important in complex procedures with extensive dissection like rhomboidal flabs. Also, postoperative infection in surgical management of pilonidal disease usually means high rate of recurrence. The anal sphincter is another issue in term of magnitude of affection by the surgical procedure. The transient postoperative incontinence, which may occur, contributes to more liability of infection and patient suffering & un-satisfaction.

Excision and primary closure is a good modality of treatment of the usual pilonidal sinus [7]. Closure of the wound is more cosmetically acceptable for some patients and is associated with a shorter healing time and time off work. However, this potential benefit is offset by a higher risk of postoperative infection [7]. When infection intervenes the wound must be laid open and healing time is therefore longer than if the wound had been treated by secondary intention in the first place [7]. So, the anal continuity of the pilonidal disease in this variety makes the closed method used in the original disease far away from application here because of the high risk of infection & contamination [8]. A large wound will be resulted after complete excision of the fistula. This takes a large time of healing and more suffering of patients. Also the midline closure that may be used in the original sinus carries especial complications which may be more prominent here such as wound dehiscence, unhealed wound, painful scar, recurrence by the persistence of the cleft. The use of Karydakis asymmetrical elliptical excision technique here is inappropriate in the perineal part of the sinus. The middle part of the fistula overlying the coccyx is a usual part of dehiscence on closing then ordinary sinus in closed methods, because of the sharing movement of limbs during working. If this occurred with fistula the susceptibility for infection becomes more.

In this study, A especial technique was used that assumed to be more beneficial, less suffering for the patient. The study insisted on complete meticulous excision of the disease with all side branches with fistulotomy at the distal perineal part. The wound was divided into three parts, the proximal sacral (vertical part) where elliptical excision was done with some eccentricity as much as possible specially in closure to be like Karydakis technique to gain its benefit by abolishing the cleft and avoiding a midline scar as well as less risk of unhealed wound as much as possible. The distal (perineal) part left opened with little effect on the anal sphincter by doing fistulotomy. The middle coccygeal part of the wound, which overlies the coccyx, is a common side of wound dehiscence because of the sharing movement of the legs. So, we use semi-opened method hoping for earlier healing. We did marsupialization of this part to be a transitional zone between the closed proximal part & opened distal fistultomy part, that can withstand by wound dehiscence. Marsupialization is a modification of the standard excision (open method) [9]. The skin edges are sutured to the sides of the wound. This was a compromise between a completely closed and a completely opened wound and permits a some what smaller opening than does the open technique with less healing time & recurrence rate [9]. The vertical direction of the proximal (sacral) part of the wound make it easily drained if collection occurred to the opened distal part. The use of this technique entails the use of three types of closure in one operation and hence the name of three in one technique in management of pilonidal fistula. The theoretical

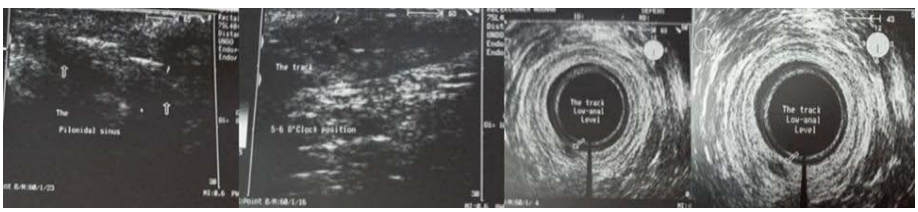

Figure 4:

rational here is to preserve the anal sphincter, more rapid healing than pure opened method, less infection then pure closed method. The cases reported short time of healing of approximately forty day, good sphincter function and no recurrence. Although three cases are too small to give clear judgment of the procedure but the theoretical advantage are reasonable waiting further cases for better evaluation. Extensive pilonidal disease is still requiring more lights to spot upon these varieties [10].

Conclusion

Pilonedal fistula described a rare variety of the sacrococcygeal pilonidal sinus that extends to the anal canal. The management is very challenging because of many factors including; the sphincter, liability of contamination & recurrence, as well as long time for healing and complain from the size of the wound. The study provides three in one technique for better results and less patients suffering. It entails meticulous excision of the fistula and closure of the wound by three different methods; closure in layer proximally, marsupialization in the middle part and left open (fistulotomy) in the distal anal part. The cases reported short time of healing of approximately forty days, good sphincter function and no recurrence. Although three cases are too small to give clear judgment of the procedure but the theoretical advantages are reasonable waiting further cases for better evaluation.

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Austin Surg Case Rep - Volume 4 Issue 1 - 2019
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