

Limberg Flap Closure for Pilonidal Sinus Disease

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Abstract

Introduction: Though Pilonidal sinus disease (PSD) is a benign disease it can be debilitating at times. Though there are many techniques for treating the disease, they have prolonged recovery and risk of recurrence. Limberg flap repair is a novel technique as it is curative with minimal incidence of recurrence and the healing is better.

Methods: All patients diagnosed with PSD irrespective of their age were included in the study and underwent Limberg Flap Closure under spinal anesthesia in prone position.

Results: During the study period of two years, eleven patients were operated. Most of them were young males. Admission was usually for 4 days (3 to 7 days). One patient had superficial surgical site infection which healed after 10 days one patient developed seroma which was asymptomatic and three patients had hypoesthesia on the upper portion of the flap. There was no recurrence over three years follow up

Conclusion: Limberg Flap Closure for Pilonidal Sinus Disease is a safe procedure with acceptable morbidity and less risk of recurrence.

Keywords: Pilonidal sinus disease, Limberg flap closure, Rhomboid excision, Seroma

Introduction

Pilonidal sinus disease (PSD) is a common disease affecting predominately young males after puberty occurring usually in the sacrococcygeal region but also in axilla, suprapubic area etc.¹ There are many non-surgical as well as surgical treatments such as injection of phenol, cryosurgery, excision, marsupialization, Bascoms procedure, Flap closures etc.^{2,3} Conservative methods are usually not curative. Marsupialization has less recurrence but it is associated with a prolonged healing time. With all these various modalities, a recurrence rate of 15 – 25% has been reported.⁴

Limberg flap procedure was described 20 years ago and has been used for treatment of Pilonidal sinus disease. It is novel approach as it not only involves removing the diseased tissue in block but also provides better results as the healing is by primary intention. In this study we review 12 patients of Pilonidal sinus disease treated with Limberg flap closure.

Methods

Patients admitted with Pilonidal Sinus Disease and treated by Limberg Flap Closure over 2 years period (January 2008- December 2009) were reviewed and followed for 3 year for recurrences. Clinical presentation, duration of surgery, duration of admission and complications were analyzed.

At the morning of the surgery the lower back was shaved. All patients were operated under spinal anesthesia in prone position. The tissue with sinus was marked in a rhomboid with the corners one centimeter lateral to the midline. (Figure 1) A flap was raised from the right buttock which included the skin, subcutaneous fat and gluteal fascia and was stitched to the floor of the defect.(Figure 2) A vacuum suction drain was placed and was removed on 3rd to 5th post operative day.(Figure3,4) Patients were discharged when they were comfortable and ambulatory. Follow up was done at 30 days and six monthly for three years by

telephone and were asked for any swelling, discharge or pain around the gluteal cleft.

Steps of surgery



Figure 1: Incision site is marked and Rhomboid excision of the PSD is done with preparation of the Flap

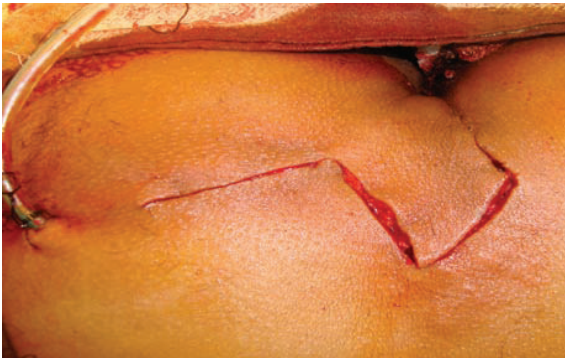


Figure 2: Closure of the defect with the Rhomboid flap



Figure 3: Wound after suturing



Figure 4: Wound after removal of stitches

Results

Eleven patients were operated for PSD and most of them were young males. (Figure 5, 6) Two of the patients were operated for recurrent disease. Most of the patients had symptoms for a year ranging from 5 months to 3 years. (Figure 6) Surgery was done under spinal anesthesia under prone position. Average duration of surgery was 45 ± 8.3 minutes (range 40 – 90 mins). Admission was usually for 4 days (3 to 7 days). One patient had SSI which healed after 10 days which was managed on an out-patient basis with secondary suturing done after 2 weeks. Three patients had hypoesthesia on the upper portion of the flap and one patient developed seroma which was asymptomatic and hence no intervention was required. None of the patients developed flap necrosis. None of the patients have had recurrences on follow up of 3 years.

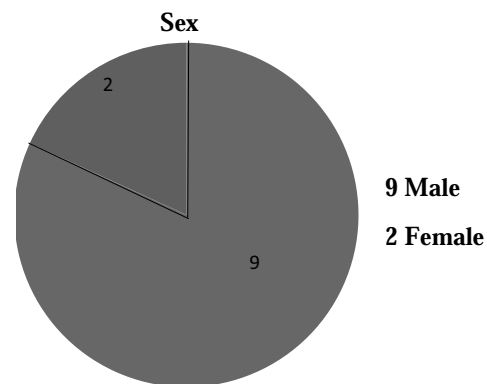


Figure 5: Sex Distribution

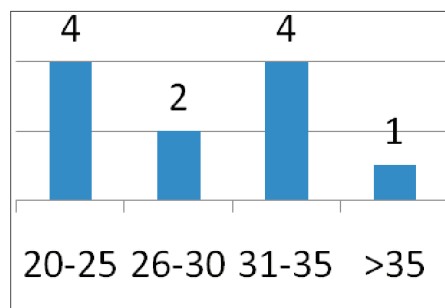


Figure 6: Age of patients operated.

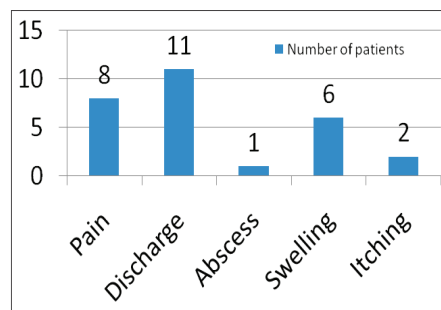


Figure 7: Complains at presentation

Discussion

Though described in 1833 by Herbert Mayo as a hair containing sinus, the term Pilonidal was coined in 1880 by Hodge. Though PSD is a benign disease, as it gets infected recurrently, it can be debilitating and cumbersome. There have been reports of squamous cell carcinoma developing in longstanding cases of PSD though it may take about two decades and few have developed necrotizing fasciitis and toxic shock syndrome when the disease is left untreated.^{5,6}

Limberg flap for PSD is ideal because it removes all the diseased tissue, healing is with primary intention and the scar stays away from the natal cleft. There is male preponderance of the disease which is reflected well in our study.⁷ Various studies have shown complication of 0 – 16 % and recurrence rates of 0 – 5 %.^{7,8} Duration of Hospital stay was also similar to these studies. None of our patients had recurrence on a three year follow up.

Conclusion

Limberg flap closure is a safe procedure for Pilonidal sinus disease with acceptable morbidity and less risk of recurrence.

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