Outcome of Karydakis Procedure for Pilonidal Sinus

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Objective: To analyze the Outcome of karydakis procedure for pilonidal sinus. **Design**: Prospective interventional study **Place and Duration:** Lahore General Hospital, Lahore from January 2001 to December 2004. **Material and Methods:** Patients with chronic pilonidal sinus and Karydakis procedure was adopted. **Results**: Total No of 60 patients underwent excision and asymetrical primary closure. Six patients required intravenous analgesia minor wound infection was present in twelve patients (20%). Forty eight (80%) patients were able to resume normal household activities with in two weeks while full outdoor activities were possible in two to three weeks in nearly 100 % of cases conversion to open methods was zero with recurrence rate 5% (3 Cases) patients acceptability was 90% (54 Cases)
Keywords: Pilonidal sinus, Karydakis procedure

Pilonidal sinus is a common disorder that affects male mainly but in rare instances it also affects females[7,8]. Pilo means appertaining to a nest of hairs (Latin pilus: hair, nidus: nest). There were many theories regarding its etiology initially it was thought to be congenital but now it is believed to be acquired in origin although it can affect axilla, umbilicus and interdigital cleft it is mainly present in post natal cleft (sacrococcygeal area). At all these sides loose broken hairs accumulate and penetrate the skin or open mouth of sudoriferous glands setting in inflammation[1]. Many surgical techniques are described in literature to treat the disease which include conservative approach like shaving, antibiotics and anti inflammatory drugs, Phenol injection, open technique and various closed techniques[3,4,5,7]. The ideal operation of pilonidal sinus should be simple require short hospitalization minimal inconvenience with a low reoccurrence rate. We used Karydakis technique to treat all these patients and results were evaluated on above mentioned parameters and described below.

Aims and Objective:
To analyse the outcome of karydakis procedure for pilonidal sinus in patients with simple chronic pilonidal sinus

Patient and method:
***Inclusion criterion*:** All patients with chronic uninfected pilonidal sinus in the natal cleft who came in one of the surgical outdoor of Lahore General Hospital Lahore
Exclusion criterion: Patients with abscess formation and acute inflammation and complex recurrent sinus From Jan 2001 to Dec 2004 a total no of sixty(60) patient were admitted the procedure was discussed with the patient and they were scheduled for Karydakis procedure under general anaesthesia. After patient is positioned prone with buttocks strapped apart. Methlene blue is injected through external pits to stain the main tract and any of its ramifications. An at least 5cm long asymmetrical elliptical incision is made around the main tract of pilonidal sinus with each end of incision placed 2cm to one side of midline and the center encompassing the midline pits. . A boat shaped wedge of tissue including the sinus and its ramifications is removed up to post sacral fascia. Diathermy is not used until the tissue has been excised to avoid confusion of burn marks with methylene blue. A 2cm wide and 1cm thick flap is created from the medial side of the wound and advanced and stitched to post sacral fascia and to the other edge of the wound after complete haemostasis. Tension sutures were laid and tied over gauze. We have also used suction drain for blood, serum and to eliminate dead space. Skin is stitched with interrupted sutures. Patients were discharged after 24 hrs on oral antibiotics and analgesics while they were instructed to have bed rest, keeping off their back and usual precautions for the next few days and were instructed to come daily in the ward for wound inspection and change of dressing. tension sutures were removed on fifth post operative day while drain and skin stitches were removed on 10th post operative day. The patients were followed for one year. Post operative pain, wound infection, return to work, healing time, wound failure, recurrence, cosmetic appearance and patient acceptability were the parameters used to measure the outcome.

Results:
A total number of sixty (60) patients with non infected pilonidal sinus from Jan 2001 to Dec 2004 were admitted in one of surgical ward of Lahore General Hospital Lahore. All were males age between 15 to 45 years. All patients were treated with karydakis procedure and discharged after 24 hrs. in six patients (10 %) pain had to be controlled with intravenous single injection of narcotic analgesia while in 54 (90%) patients it was controlled with simple intramuscular injection of diclofenac sodium (Table I). Infection in the form of stitch abscess and minor wound infection was present in 12 patients (20%) without systemic effects (Table II).48 (80%) patients were able to resume their normal daily activities in 2 weeks while full fledge working activities were possible within one month (Table III). healing time was 2-4 weeks. Conversion to open method was zero in this study while recurrence rate

was 5% (3 cases) (Table IV). Cosmetic appearance and patients acceptability was 90%(54)

Table I: Post-op analgesia

I/V Narcotic Analgesia	I/M NSAID
6 (10 %)	54 (90 %)

Table II: Post-op wound infection (Stitch Abscess & Minor Infection)

Wound Infection	No Wound Infection
12 (20 %)	48 (80 %)

Table III: Resumption to work

1–2 Weeks (Household Activities)	3–4 Weeks (Full Outdoor Activities)
48 (80 %)	57 (95 %)

Tab le IV: Success rate of procedure

Conversion to Open	Recurrence	Successful
Zero (0 %)	3 (5 %)	57 (95 %)

Discussion:

The rational treatment of pilonidal sinus should be according to its clinical course. Some of these cases initially present with an acute abscess and drainage of abscess provides a definitive treatment in half of these patients and if the disease persists beyond 10 weeks additional surgery should be considered[2]. We treated these types of cases with oral antibiotics and when infection settled they were admitted for surgical treatment. Among Surgical treatment of chronic pilonidal sinus there are (1) open excision and healing with secondary intention.(2) excision and primary closure with different techniques like karydakis[3,4] ,bascom[4] and closure with various flaps. like elliptical rotation flap, rhomboid and fasciocutaneous flaps[7,8]. Open excision technique need long hospitalization and daily wound dressing wound breakdown is also another disadvantage caused by premature closure of the skin edges before complete wound healing[7]. Excision of the disease tissue down to the post sacral fascia is generally accepted but the management of remaining defect is still a matter of debate we have adopted the asymmetrical closure of karydackis technique in all our patients. During four years we never treated even a single patient with open technique . Sixty males were treated with karydakis technique. We tried to keep incision out of the natal cleft where wound healing is poor. The goal of asymetric incision and closure was reduced the depth of natal cleft those reducing the recurrence rate. We used closed suction drain in all these cases for 8 to 10 days and found it to be good edition to original karydakis technique. Patients were discharged after 24 hours and were asked to visit hospital daily for wound inspection and change of dressing for initial one week so reducing prolonged hospital stay and cost. Twelve (20%) who developed minor wound infection were managed successfully with daily twice dressing and continuation of antibiotics. While pain was also easily controlled with oral non steroidal anti inflammatory drugs. In our study there was no significant limitation of moments and other activities which is probably due to better pain and infection control with good analgesics and antibiotics. In present study conversion to open technique were zero as compare to other series which is quite significant perhaps it is due to use of suction drain and application of tension sutures. We have recurrence in three of out patients (5%) with in six months. It was mid line and the reason was that in these cases we failed to close the wound asymetrically away from the mid line. These cases were successfully managed with simple incision and curettage. Cosmetic appearance and patient's acceptance regarding the procedure was not a significant problem and it satisfied 90% (54) of our patients . These patients were mostly concerned about early return to their work which was about two weeks and was acceptable to most of the patients.

Conclusion:

Patients with Pilonidal sinus are mostly men , young and have long expectancy. We believe that the total excision of the diseased tissue is necessary to avoid recurrence. In these expects we found karydakis techniques a good , satisfying and simple and recommend its use in all noninfective chronics pilonidal sinus .

References:

1. Pilonidal sinus, Bailey and Love Short practice of surgery 24th addition
2. Karydakis G.E. Easy and successful treatment of pilonidal sinus after explanation of its causative process. Aust NZ.J Surg 1992;62:385-389
3. P. R. B. Kitchen. Pilonidal sinus Experience with the Karydakis flap, B.J.S 1996,83,1452-1455
4. A. Senapati, N.P.J. Cripps, M.R. Thompson Bascom's operation in the day-surgical management of symptomatic pilonidal sinus, B.J.S 2000; 87: 1067-1070
5. Raffaele Triapepe Excision and primary closure of pilonidal sinus using a drain for antiseptic wound flushing, A.J.S 183. (2002) 209-211
6. A.J .Bukhari , A. Bhutta et all. Treatment of pilonidal sinus : Comparison of primary closure by Karydakis technique and wide local excision. vol 9 Issue 2 Apr-Jun 2003
7. Gurel Nessar, Cuneyt Kayaalp, Elliptical Rotation Flap for Pilonidal Sinus, A.J.S 187 (2004) 300 - 303
8. E. Cosentini Knowledge-based therapy of the pilonidal sinus (Eur Surg (2004) 3673: 16-167
9. Jenson SL, Haling H, Simple incision and drainage for a first episode of acute pilonidal Abscess BJS 1989, 75(60-62)