



Case Series

Advantages and Efficacy of Minimal Invasive Moshi-Gips Technique in Pilonidal Sinus Surgery

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Abstract

Pilonidal sinus is an discomfort illness affect men twice than female and more in young and mediterrian raise .

This disease is happen by ingrown hair in the sacrococcygeal region due to suction effect at setting so it's more in students, office worker and drivers. Because of foreign body inside (usually hair) and debris lead to chronic inflammation and epithelial tissue prevent the pit from closing that lead to chronic open and bloody discharges and some times when catch infection abscess will develop which is usually superficial and sever painful case and need emergency surgical intervention under LA by incision and drain. Many surgical intervention has been tried to manage this disease like unroofing the sinus or closing on the midline or rise flaps to reduce recurrence rate but still painful and require high surgical skills and closely medical follow up after operation. Many minimal invasive techniques has been develop to reduce recurrence and post operation complications and improve surgery outcome. Moshe –gips technique is an minimal invasive technique has been proposed and has provided optimal preliminary results in 1st international pilonidal conference .berlin . Sept 23rd 2017 organized by APSS, Australian pilonidal sinus society. Therefore, we decided to conduct a prospective clinical trial to validate the advantages and efficacy of this new treatment.

Importance: Moshi-gips technique is a new minimally invasive treatment based on the complete removal of the sinus external pits with a minimal surgical wound by curetting the sinus cavity to remove all foreign bodies (usually hair) and debris then irrigate the wound by H2O2 to achieve hemosatsis and treat the infection.

Objective to Evaluate: The advantages and efficacy of minimal invasive moshi-gips technique in pilonidal sinus surgery

Design, Setting, and Participants

From 1\1\2021 till 1/11/2022 (4 patients has been operated by moshe-gips technique)

3 patients with non-infected chronic pilonidal sinus, one patient with pilonidal abscess treated by incision and drain then develop sinus.

Interventions

Moshe-gips technique

Main Outcomes and Measures: The primary end point of the study was time of operation from the beginning of anesthesia till finish from dressing .

Secondary end points were the rates of operative success and post operation complications (bleeding , oozing,infection and recurrence), healing time , time back to work , and intraoperative and postoperative pain ratings, patients satisfaction .

Rate on score from less 1 to max 10

Results

4 patients operated in moshe -gips.

Average operation time was 16.75 m and SD 2.3.

Average post operation bleeding 48 h on scale from 1 to 10 in was 2 and SD 0.81 .

Infection was zero.

Recurrent rate within 6 m after operation : one patient has recurrent and re-operated in the same technique then 6 m free .

Average post operation pain on scale from 1 to 10 . was 1.25 and SD 0.5.

Average of healing time in weeks was 4 and SD 0.81 .

Average of time back to work by days was 4.5 day and SD 0.

Average of post operation patients satisfaction was 9.75and SD 0.5 .

Conclusions and Relevance

Moshe –gips technique in pilonidal sinus surgery has been proved to be effective and less post operation disturbance and faster healing and go back to normal life and work . so in our study we may recommend this technique as primary operation for pilonidal sinus and keep the traditional surgery for recurrent or complicated cases.

Introduction

Pilonidal disease (cyst, infection) consists of a hair-containing sinus or abscess occurring in the intergluteal cleft. Although the etiology is unknown, it is speculated that the cleft creates a suction that draws hair into the midline pits when a patients sits. Incidence is reportedly 26 per 100 000 population, affecting males twice as often as females and predominantly affecting young adults of working age (Oxford hand book of clinical surgery , 4th edition) [1]. These ingrown hairs may then become infected and present acutely as an abscess in the sacrococcygeal region. Once an acute episode has resolved, recurrence is common. An acute abscess should be incised and drained as soon as the diagnosis is made. Because these abscesses are usually very superficial, this procedure can often be performed in the office, clinic, or emergency room under local anesthetic.

A number of procedures have been proposed to treat a chronic pilonidal sinus. The simplest method involves unroofing the tract, curetting the base, and marsupializing the wound. The wound must then be kept clean and free of hair until healing is complete (often requiring weekly office visits for wound care). Alternatively, a small lateral incision can be created and the pit excised. This method is effective for most primary pilonidal sinuses. In general, extensive resection should be avoided. Complex and/or recurrent sinus tracts may require more extensive resection and closure with a Z-plasty, advancement flap, or rotational flap.(Schwartzs-Principles-of-Surgery-Tenth-Edition) [2]. A new minimally invasive treatment of pilonidal sinus, moshe –gips technique , has been proposed

and has provided optimal preliminary results in 1st international pilonidal conference .berlin . Sept 23rd 2017 organized by APSS, Australian pilonidal sinus society [3,4]. Therefore, we decided to conduct a prospective randomized clinical trial to validate the advantages and efficacy of this new treatment.

Methods

From 1/1/2021 till 1/11/2022 we have 4 patients has been diagnosed by non-complicated or recurrent pilonidal sinus 3 patients , one patient with pilonidal sinus post pilonidal abscess incision and drain. those patients underwent for surgery by moshe gips technique under local anesthesia and sedation for one patient. All patients were informed in detail about the potential risks and benefits of both operations and provided written consent for the surgical procedure once the patient go for OT. In addition to a general indication for surgery, if signs of inflammation in the surrounding tissues were detected, antibiotic treatment was given to all patients as one dose of cefazolin before the op and other dose after 12 h. No restriction on return to work was given to any of the patients in either study group.

End Points and Statistical Power

The primary end point of the study was time of operation from the beginning of anesthesia till finishing dressing. Secondary end points were the rates of operative success and post complications (bleeding , oozing,infection and recurrence), healing time , time back to work , and intraoperative and postoperative pain ratings. Rate on score from less 1 to max 10

Operation Techniques

Under LA 60 ml xylocaine 1% with epinephrine 1/100000 and sedation in one case after prepare skin by antiseptic sol I remove the lateral pits if there by punch puncture no.7 then mid line pits by punch puncture no.4 then curate the tract many times and remove all debrids and irrigate by H2O2 then apply sterile dressing ... All patients were placed in the prone position with the hips slightly flexed. The buttocks were retracted with adhesive tape.

Assessment and follow up

All patients were examined during follow-up with a standard physical examination after 1 day, 1 week, then weekly visit for 6 week then last visit after 6 m from op date . This is an interim analysis at 1 year.

Statistical Analysis

After collecting the operation time and time of healing and back to work , and note the level of bleeding and pain on scale from 1 to 10. Statistical analysis was performed with Microsoft office excel work sheet to make the average and SD.

Results

Patient Characteristics 4 patients were involve to this study with non- complicated or recurrent pilonidal sinus disease to moshe-gips technique . no other criteria like old or sex or obesity or no. of pits depended .

Operative Time . was (16.75 minute in the average) and (SD 2.3) .

Post operation bleeding within 48 h . was (2 on scale from 10 in the average) and (SD 0.81) .

Post operation infection . no infection detected.

Post operation recurrent rate within first 6 month .. one patient has recurrent after 2 month and re-operated in the same technique and (SD 0.5).

Post operation pain . was (1.25 on scale from 10 in the average) and (SD 0.5) ..

Post operation healing time by weeks . was(4 week in the average) and (SD 0.81) .

Post operation time back to work by days . patients enrolled in the minimally invasive treatment go back to their normal life style and work (4.5 day in the average) and (SD 0.57) .

Patients satisfaction . patients enrolled in the minimally invasive treatment group expressed high satisfaction at 1 month and 6 months after surgery (the average of satisfaction 9.75 from 10 on scale) and (SD 0.57) .

Discussion

The aim of this study to identify the advantages and efficacy of moshe –gips technique after being depended in 1st international pilonidal conference .berlin . Sept 23rd 2017 organized by APSS , Australian pilonidal sinus society . The ideal therapy would be a quick cure that allowed patients to return rapidly to normal activity, with minimal morbidity and a low risk of complications. Many procedure has been tried and offer for pilonidal sinus disease and many changes on this procedure toke place to reduce complication like bleeding , pain , infection and the most important is recurrent of the disease.

The simplest one was unroofing the sinus with curetting the debridements and keep it open to heal by secondary attention , in this technique you need daily dressing and it extremely painful and difficult to take care about the wound , need more time to heal according to big hole you left behind and very high recurrence rate . then many surgical teams develop many technique to reduce those complication by trying to close the wound on the midline but still high rate of the recurrence , then develop flap rise technique like bascom and karydakis flap or rotation flap like rhomboid flap or keystone flap and achieve improvement by decrease recurrent rate but it was big procedure to do and there is high risk of bleeding and flap necrosis. So in this technique , it's offer to remove the pit open to excise the epithelial tissue which prevent the pit from closing then curate the tract to remove all foreign bodies and debrids and inflamed tissue to lunch new healing process under good medical care in this technique you preserve the skin and make minimal injuries which lead to less pain and bleeding and faster in healing and come back to work earlier.

Conclusions

In our study we proof that . this minimal invasive technique (moshe-gips technique) has advantages to reduce operation time which was in an average about 16.75 minute , reduce post operation pain and complications , reduce time of healing and days off and has similar low recurrence rate of conventional surgery. patients very much satisfy of the results. So we may recommend this technique in treatment of non-infected or complicated or recurrent pilonidal disease as primary procedure to do.

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