

Use of Laser Hair Removal after Pilonidal Surgery

Imran Idris Butt¹, Munawar Nadeem¹, Rehan Anwar¹, Kamran Hamid⁴,
Muhammad Sabir² and A. Hamid³

ABSTRACT

Objectives: To study the role of laser hair removal after pilonidal surgery.

Study Design: Prospective / Experimental study.

Place and Duration of Study: This study was conducted at Idris Teaching Hospital Sialkot. July 2014 to July 2016.

Materials and Methods: This study included sixty patients in the department of surgery at Idris Teaching Hospital Sialkot during July 2014 to July 2016. In all cases of pilonidal surgery the laser hair removal was used to remove the hair on buttocks, perianal region, and lower back of the patients. The performa was designed to record age, sex, history of the pilonidal sinus disease, date of surgery, surgery type, number of laser treatments. The numbers of laser hair removal treatments were from 2 to 5 and performed at the intervals of 6 to 8 week. Laser hair removal performed after healing from pilonidal surgery. The follow up of all the patients was also recorded. The consent of every patient was taken before pilonidal surgery and laser treatment. The data was analyzed for results by SPSS version 10.

Results: In our study it was found that the maximum (45%) 27 cases of pilonidal sinus disease were between the age of 18 – 23 years and minimum (1.6%) 01 case at the age of 39 and above. The study showed (93.3%) 56 cases were male and (6.7%) 04 cases were female. It means the incidence of pilonidal sinus disease was maximum in male as compared to female. The socio economic status distribution was much higher (42-50%) 25-30 cases in high and middle socio economic class as compared to low socio economic class (8.3%) 05 cases. Maximum (90%) 54 patients of pilonidal sinus disease were from urban area as compared to rural area (10%) 06 patients. The surgery of pilonidal sinus disease was conducted within 24 hours after admission of the patients. All the patients were discharged from the hospital within 24-48 hours. The return to work time was 1-2 weeks in all of 60 patients and healing time was 3-5 weeks. The recurrence was (14%) 08 cases in primary closure and (10%) 06 cases was after secondary healing.

Conclusion: We advise the use of laser hair removal after pilonidal surgery. As this decreases the chance of recurrence.

Key Words: Excision, Laser Hair Removal, Pilonidal sinus disease, Recurrence, Primary and Secondary healing.

Citation of article: Butt II, Nadeem M, Anwar R, Hamid K, Sabir M, Hamid A. Use of Laser Hair Removal after Pilonidal Surgery. Med Forum 2017;28(4):152-154.

INTRODUCTION

Pilonidal sinus disease, ranging from the routine cyst with abscess to extensive chronic infection and sinus formation. The sinus arises in the hair follicles in the gluteal or natal cleft. There is incidence 26 per 100,000 people. Men affecting twice more than women¹. The sinus discharging wounds cause pain and affect the quality of life. The treatment require the finishing of the sinus tract, complete healing of the overlying skin and prevention of recurrence.

¹. Department of Surgery/ Anatomy² / Forensic Medicine³, Sialkot Medical College, Sialkot.

⁴. Department of Surgery, Allama Iqbal Memorial Teaching Hospital, Sialkot.

Correspondence: Dr. Imran Idris Butt, Assistant Professor Department of Surgery Sialkot Medical College, Sialkot.

Contact No: 0300-8611304

Email: hrd.smcs@yahoo.com

Received: February 14, 2017; Accepted: March 28, 2017

There is a conservative treatment to an extensive surgical excision. The surgical treatment result in healing of 58% of cases within 10 weeks, but recurrence occurs varying from 11% to 14%².

Lasers have been used for hair removal since 1996. This is a permanent method of hair reduction. There is 60–80% reduction in hair growth at 6 months reported by numerous studies³⁻⁵. Multiple laser hair removal treatments increase the hair-free period between treatments, and also decrease the percentage of hair re-growth⁶. There are no scars and other complication with laser hair removal⁷⁻⁸.

It is thought that in initiating the abscess, excessive hair growth in the natal cleft is a major factor. It is also found that hair are often found trapped in the base of pilonidal wounds⁹.

The aim of our study was to see the role of laser hair removal after pilonidal surgery prospectively.

MATERIALS AND METHODS

This prospective experimental study included sixty patients in the department of surgery at Idris Teaching

Hospital Sialkot during July 2014 to July 2016. In all cases of pilonidal surgery the laser hair removal was used to remove the hair on buttocks, perianal region, and lower back of the patients.

The performa was designed to record age, sex, history of the pilonidal sinus disease, date of surgery, surgery type, number of laser treatments. The numbers of laser hair removal treatments were from 2 to 5 and performed at the intervals of 6 to 8 week. Laser hair removal performed after healing from pilonidal surgery. The follow up of all the patients was also recorded. The consent of every patient was taken before pilonidal surgery and laser treatment. The data was analyzed for results by SPSS version 10.

RESULTS

In our study it was found that the maximum (45%) 27 cases of pilonidal sinus disease were between the age of 18 – 23 years and minimum (1.6%) 01 case at the age of 39 and above as shown in table no 1. The study showed (93.3%) 56 cases were male and (6.7%) 04 cases were female as shown in table no 2. It means the incidence of pilonidal sinus disease was maximum in male as compared to female. The socio economic status distribution was much higher (42-50%) 25-30 cases in high and middle socio economic class as compared to low socio economic class (8.3%) 05 cases as shown in table no 3. Maximum (90%) 54 patients of pilonidal sinus disease were from urban area as compared to rural area (10%) 06 patients as shown in table no 4.

Table No 1: Age Distribution in use of Laser In Pilonidal Surgery

Sr No	Age (Years)	Cases	Percentage %
1	18-23	27	45%
2	24-28	13	21.70%
3	29-33	12	20%
4	34-38	7	11.70%
5	39 & Above	1	1.60%
Total		60	100%

Table No 2: Sex distribution in use of Laser in Pilonidal Surgery

Sr No.	Sex	Cases	Percentage %
1	Male	56	93.30%
2	Female	4	6.70%
Total		60	100%

Table No 3: Socio econmic Status distribution in Laser use in Pilonidal Surgery

Sr No.	Socio-Econmic Status	Cases	Percentage %
1	High	30	50%
2	Middle	25	41.70%
3	Low	5	8.30%
Total		60	100%

The surgery of pilonidal sinus disease was conducted within 24 hours after admission of the patients. All the patients were discharged from the hospital within 24-48 hours. The return to work time was 1-2 weeks in all of 60 patients and healing time was 3-5 weeks. The recurrence was (14%) 08 cases in primary closure and (10%) 06 cases was after secondary healing as shown in table no 5.

Table No 4: Area distribution in use of Laser In Pilonidal Surgery

Sr No.	Area	Cases	Percentage %
1	Urban	54	90%
2	Rural	6	10%
Total		60	100%

Table No 5: Healing Time, return to work time and recurrence rate in Pilonidal Surgery with use of Laser

Sr#		Cases	%age
1	Healing Time	60	100%
	3-5 Weeks	Cases	Percentage %
2	Return to work time	60	100%
	1-2 Weeks	Primary Closure	Secondary Heeling
3	Recurrence Rate	14%	10%

DISCUSSION

Pilonidal sinus disease may be small pilonidal cysts or sinuses to chronic disease with multiple sinus tracts. The aim of the treatment of pilonidal disease is excising and healing with a low rate of recurrence. There should be minimum patient inconvenience and morbidity after the pilonidal surgery. In pilonidal sinus disease men are affected twice as women (10), but in our study more than (90%) men are the patients of this disease. The pilonidal sinus disease is the result of a foreign body response to entrapped hair (13). In pilonidal sinus disease, permanent hair removal in the gluteal area decreases the risk of recurrence (14-15).

In some studies, the recurrence rate of pilonidal sinus varies depending on the method of treatment (10-14, 16-18). In our study, recurrence rate was 10-14% which may be due to the long-term laser hair removal after pilonidal surgery. It was reported by Benedetto and Lewis in their studies that the recurrence rate was reduced by laser hair removal after pilonidal surgery (13). It was also observed by Conroy et al. (20) that recurrence rate was reduced by use of laser hair removal after pilonidal surgery. It was seen by Schulze and colleagues (21) that recurrence was very much reduced by use of laser hair removal after pilonidal surgery. It showed that the use of laser hair removal is advise able in all cases of pilonidal surgery.

In our study the socio economic status distribution was much higher (42-50%) 25-30 cases in high and middle socio economic class as compared to low socio economic class (8.3%) 05 cases. Maximum (90%) 54 patients of pilonidal sinus disease were from urban area

as compared to rural area (10%) 06 patients. The surgery of pilonidal sinus disease was conducted within 24 hours after admission of the patients. All the patients were discharged from the hospital within 24-48 hours. The return to work time was 1-2 weeks in all of 60 patients and healing time was 3-5 weeks. The recurrence was (14%) 08 cases in primary closure and (10%) 06 cases was after secondary healing.

CONCLUSION

We advise the use of laser hair removal after pilonidal surgery. As this decreases the chance of recurrence.

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Karydakakis GE. Easy and successful treatment of pilonidal sinus after explanation of its causative process. *Aust NZ J Surg* 1992;62:385-9.
2. Ertan T, Koc M, Gocmen E, Aslar AK, Keskek M, Kilic M. Does technique alters quality of life after pilonidal sinus surgery? *Am J Surg* 2005;190:388-92.
3. Petersen S, Wietelmann K, Evers T, Hüser N, Matevossian E, Doll D. Long-term effects of postoperative razor epilation in pilonidal sinus disease. *Dis Colon Rectum* 2009;52:131-4.
4. Gault DT, Grobbelaar AO, Grover R, Liew SH, Philp B, Clement RM, et al. The removal of unwanted hair using a ruby laser. *Br J Plast Surg* 1999;52:173-7.
5. Liew SH, Grobbelaar AO, Gault DT, Sanders R, Green CJ, Linge C. The effect of ruby laser light on *ex vivo* hair follicles: clinical implications. *Ann Plast Surg* 1999;42:249-54.
6. Boss WK, Usal H, Thompson RC, Fiorillo MA. A comparison of the long-pulse and short-pulse Alexandrite laser hair removal systems. *Ann Plast Surg* 1999;42:381-4.
7. Williams R, Havoonjian H, Isagholian K, Menaker G, Moy R. A clinical study of hair removal using the long-pulsed ruby laser. *Dermatol Surg* 1998;24:837-42.
8. Solomon MP. Hair removal using the long-pulsed ruby laser. *Ann Plast Surg* 1998;41:1-6.
9. Petersen S, Wietelmann K, Evers T, Hüser N, Matevossian E, Doll D. Long-term effects of postoperative razor epilation in pilonidal sinus. *Dis Colon Rectum* 2009;52:131-4.
10. McCallum IJ, King PM, Bruce J. Healing by primary closure versus open healing after surgery for pilonidal sinus: Systematic review and meta-analysis. *BMJ* 2008;336:868-71.
11. Benedetto AV, Lewis AT. Pilonidal sinus disease treated by depilation using an 800 nm diode laser and review of the literature. *Dermatol Surg* 2005;31:587-91.
12. Sadick NS, Yee-Levin J. Laser and light treatments for pilonidal cysts. *Cutis* 2006;78:125-8.
13. Downs AM, Palmer J. Laser hair removal for recurrent pilonidal sinus disease. *J Cosmet Laser Ther* 2002;4:91.
14. Landa N, Aller O, Landa-Gundin N, Torrontegui J, Azpiazu JL. Successful treatment of recurrent pilonidal sinus with laser epilation. *Dermatol Surg* 2005;31:726-8.
15. Doll D, Krueger CM, Schrank S, Dettmann H, Petersen S, Duesel W. Timeline of recurrence after primary and secondary pilonidal sinus surgery. *Dis Colon Rectum* 2007;50:1928-34.
16. Clothier PR, Haywood IR. The natural history of the post anal (pilonidal) sinus. *Ann Royal Coll Surg Engl* 1984;66:201-3.
17. Lavelle M, Jafri Z, Town G. Recurrent pilonidal sinus treated with epilation using a ruby laser. *J Cosmet Laser Ther* 2002;4:45-7.
18. Conroy FJ, Kandamany N, Mahaffey PJ. Laser depilation and hygiene: Preventing recurrent pilonidal sinus disease. *J Plast Reconstr Aesthet Surg* 2008;61:1069-72.
19. Schulze SM, Patel N, Hertzog D, Fares LG. Treatment of pilonidal disease with laser epilation. *Am Surg* 2006;72:534-7.