



COMPARATIVE ANALYSIS OF LASER HEMORRHOIDOPLASTY VERSUS OPEN HAEMORROIDECTOMY

General Surgery

Dr Asmita Jaiswal* RSOIII, Dept of General Surgery, IMCHRC, Indore. *Corresponding Author

Dr Udit Narang RSOIII, Dept of General Surgery, IMCHRC, Indore.

Dr Manish Patel Professor, Dept of General Surgery, IMCHRC, Indore.

ABSTRACT

Hemorrhoidal ailment is one of the commonly occurring diseases of the rectum and the large intestines with the estimated global prevalence between 2.9% to 27.9%, of that approximately 4% are symptomatic. Post hemorrhoidectomy pain is the most common problem related with the surgical methodologies. The present study was conducted to compare the laser hemorrhoidoplasty versus open surgery

KEYWORDS

Ailment, Hemorrhoidoplasty, Laser, Postoperative.

INTRODUCTION

Hemorrhoidal ailment is one of the commonly occurring diseases of the rectum and the large intestines with the estimated global prevalence between 2.9% to 27.9%, of that approximately 4% are symptomatic. [1,2] About, one third of the subjects seek doctor's for advice. Age distribution has shown a peak incidence between 45 and 65 years of age with further decline after the age of 65 years. [3,4] Males are more commonly affected compared to females. [5] Hemorrhoids are thought to be due to the descending displacement Treitz muscle. [6,7] The treatment choices for symptomatic hemorrhoids have been diverse. Measures include conservative management, non-surgical managements with a variety of surgical techniques. The various non surgical protocols include ligation with rubber band, injection sclerotherapy, cryotherapy, coagulation using infrared, laser therapy and diathermy.

These can be performed in outpatient department without anesthesia. These nonsurgical methods are the primary choice for grades one to three hemorrhoids.[8] Post hemorrhoidectomy pain is the most common problem related with the surgical methodologies. The other types of early complications include urinary retention, bleeding and subcutaneous abscess.[9] The long-term complications like anal fissure, anal stenosis, incontinence, fistula and recurrence can also occur. [10,11] The present study was conducted to compare the laser hemorrhoidoplasty versus open surgery.

CASE STUDY

The present prospective comparative study was done amongst 60 subjects, 30 patients were operated with laser method and 30 patients were managed with open surgical technique. Patients were assigned into 2 different groups, as per their condition. The study was conducted for a period of 2 years. All the subjects were informed about the study and a written consent was obtained from them in their vernacular language. Ethical committee clearance was obtained from the institutional ethical board.

A detailed physical observation and proctoscopy, the laser treatment procedure was done with Biolitec. The patient was kept in the lithotomy position and with a dedicated disposable proctoscope of diameter 23 mm was introduced into the anal canal. Laser shots were given with 980-diode laser in a pulsed manner to decrease the unwanted degeneration of the periarterial normal tissue. The treatment was conducted as an outpatient procedure. No bowel preparation was needed. Amongst all the patients, 2 enemas were provided 2 hours before the commencement of intervention. Other group of 30 patients were managed with open surgical hemorrhoidectomy under the local anesthesia.

Subjects were discharged after 4 to 12 hours as per their general physical condition and follow up was done for 2 to 6 months for healing and complications assessment. The postoperative pain and the complications amongst both the groups were noted. The intraoperative and postoperative parameters were also recorded in a tabulated form. All the data obtained was analyzed using SPSS software. Student t test was used for analysis and probability value of less than 0.05 was considered as significant.

Comparison Between Postoperative Pain Score And Complications Amongst Groups

	Laser group	Surgical group	P value
Postoperative pain			<0.05
Mild (1-3)	20	5	
Moderate (4-6)	7	15	
Severe(7-10)	3	10	
Complications			
Bleeding	0	1	>0.05
Urine retention	0	3	<0.05

Comparison between intraoperative and post operative outcomes

Variable	Laser group	Surgical group	P value
Operative time	31.62+/-3.89	52.86+/-2.98	<0.05
Blood loss	15.60+/-4.38	35.87+/-6.53	<0.05
Hospital stay	1.15	1.20	>0.05
Return to work	7.69+/-3.24	21.87+/-4.16	<0.05

RESULT:

The study enrolled a total of 60 subjects, with 30 in each group. The mean age of subjects in laser group was 34.87+/-3.54 years and in surgical group was 33.76+/-2.89 years. There were 40 males and 20 females in the study. The operating time in laser group was 31.62+/-3.89 mins compared to 52.86+/-2.98 in surgical group. The mean intraoperative blood loss in laser group was 15.60+/-4.38 and surgical group was 35.87+/-6.53ml.

There was a significant difference in both the variables amongst the groups.

The mean hospital stay in laser group was 1.15 and in surgical group was 1.20 days. There was no significant difference between the groups. There was significant difference in the number of days it took for the patients to return to work.

There were 20 patients in laser and 5 in surgical group with mild pain. Moderate pain was seen by 7 patients in laser and 15 patients in surgical group.

There were only 3 patients in laser group and 10 patients in surgical group with severe pain. There was a significant difference in the pain score amongst both the groups. Complications were only observed in surgical group with significant difference in urinary retention.

CONCLUSIONS

Laser hemorrhoidoplasty offers best intraoperative and postoperative outcomes when compared to surgical management. But the cost of laser is the only drawback associated with it. It offers significant reduction in the operative time and postoperative pain relief as compared to surgical treatment.

REFERENCES:

1. Johanson JF, Sonnenberg A. The prevalence of hemorrhoids and chronic constipation: an

- epidemiological study. *Gastroenterology*. 1990; 98(2): 380-386.
2. Rogozina VA. Hemorrhoids. *Eksperimental'Naia i Klinicheskaia Gastroenterologiya*. 2002; 4: 93-96.
3. Johanson JF, Sonnenberg A. The prevalence of hemorrhoids and chronic constipation: an epidemiological study. *Gastroenterology*. 1990; 98(2): 380-386.
4. Parks AG. De Hemorrhoids. A study in surgical history. *Guy's Hospital Report*. 1955; 104: 135-150.
5. Keighley MRB. *Surgery of Anus, Rectum and Colon*. 1. Vol. 1, WB Saunders publishers, 1993; 295-298.
6. Haas PA, Fox TA Jr, Haas GP. The Pathogenesis of hemorrhoids. *Diseases of the colon and rectum*. 1984; 27 (7): 442-450.
7. Thomson WHF. The nature of Hemorrhoids. *British Journal of Surgery*. 1975; 62(7): 542-552.
8. MacRae HM, McLeod RS. Comparison of Hemorrhoidal Treatment Modalities. A meta-analysis. *Dis Colon Rectum*. 1995; 38(7): 687-694.
9. Monson JRT, Mortenson NJ, Hartley J. Procedures for Prolapsing Hemorrhoids (PPH) or Stapled Anopexy. Consensus Document for Association of Coloproctology of Great Britain and Ireland. ACPGBI, 2003.
10. Bleday R, Pena JP, Rothenberger DA, Goldberg SM, Buls JG. Symptomatic Hemorrhoids: Current Incidence and Complications of Operative Therapy. *Diseases of the colon and rectum*. 1992; 35 (5): 477-481.
11. Sardinha TC, Corman ML. Hemorrhoids. *The Surgical clinics of North America*. 2002; 82(6): 1153-1167.