

## An Observational Clinical Study in Laser Treatment of Hemorrhoids of Patients from Central Jail, Sagar

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### Abstract

**Introduction:** Haemorrhoidal disease remains a common condition with an estimated prevalence 10% of the adult population. It is present in almost half of the subjects over 50 years of age. The scalpel and conventional electro-surgery unit are the surgical options of choice for anorectal surgery. Lasers are an alternative to conventional surgical systems.

**Objective:** To establish Laser treatment of haemorrhoids as a better alternative to conventional and stapler procedures for Haemorrhoids

**Methods:** We studied 105 patients with haemorrhoidal disease. We operated patients over a 6-month period, from 1 January 2023 to 30 June 2023. It included patients who underwent surgical treatment by Laser for first-, second- and a few cases of third stage haemorrhoidal disease.

**Results:** Laser haemorrhoidoplasty is a minimally invasive surgical treatment of haemorrhoidal disease with little distortion of the anal canal and has good outcome, especially for first-, second-, and third-degree haemorrhoids.

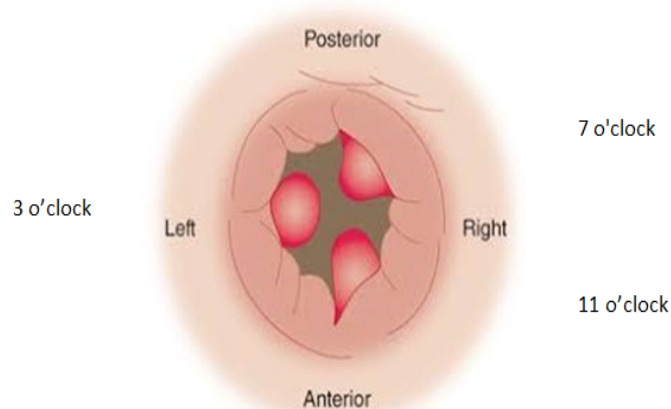
**Conclusion:** Less aggressiveness of Lasers on the anoderm and the anal canal results in less morbidity. Advanced forms such as grade 4 haemorrhoids and haemorrhoidal prolapse expose to complications under laser and remain as indications for removal by conventional surgery according to Milligan and Morgan.

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### Introduction

Haemorrhoids are cushions of submucosal tissue containing arterioles, venules and smooth muscle

fibres located in anal canal. They are found in left lateral, right anterior and right posterior positions.



Haemorrhoidal disease remains a common condition with an estimated prevalence 10% of the adult population. It is present in almost half of the subjects over 50 years of age. [1,4]

Haemorrhoids are normal vascular structures of the anal canal which participate in fine anal continence. Symptoms - per rectal bleeding, anal discomfort, pruritus ani. [5-8]

#### Goligher Classification

- ❑ commonly used to grade the severity of haemorrhoids and consequently indicates the modality of surgical treatment .
- Grade I - non-prolapsing haemorrhoids
- Grade II - prolapsing haemorrhoids on defecation with spontaneous reduction
- ❑ In advanced stages, the additional disintegration of conjoined longitudinal muscle results in their remaining permanently outside the anus
- Grade III - manually reducible
- Grade IV – non reducible

The scalpel and conventional electro-surgery unit are the surgical options of choice for anorectal surgery. Lasers are an alternative to conventional

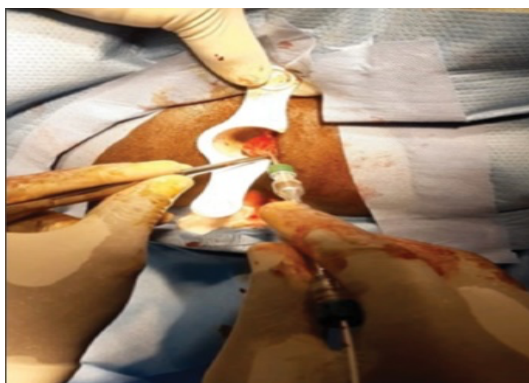
surgical systems. It acts by thermal effect and leads to sealing of the vessel walls and ablation of the vascular structures of the haemorrhoidal cushions. Its less aggressiveness on the anoderm and the anal canal results in less morbidity. [9,13]

The aim of this study was to report our data on Laser treatment of haemorrhoids through a preliminary study to discuss the short- and medium-term results. [14-18]

#### Materials and Methods

In this cross-sectional study, 105 patients with haemorrhoidal disease presenting to the General Surgery Department of Bundelkhand Medical College, Sagar were operated over a 6-month period, from 1 January 2023 to 30 June 2023. It included patients who underwent surgical treatment by Lasers for first-, second- and a few cases of third stage haemorrhoidal disease. Ethical approval was obtained from the hospital review committee before conducting the study. Informed written consent was taken from each patient before enrollment in the study. [19-24]

After taking history and carrying out relevant clinical examination, patients were taken up for Laser Haemorrhoidal Procedure. [25-28]



We used a diode laser generator, set between 12 and 15 W in pulsed mode which delivers laser energy through a radial fibre. It also incorporated the use of a windowed proctoscope and ice cubes. Mucopexy was done in cases of associated mucosal prolapse, followed by intermittent laser application.











Postoperative care included - treatment with a stage 1 or 2 analgesic, metronidazole, a laxative, twice-daily application of antiseptic. Follow-up was performed weekly until healing and then every 2 months.

Data was entered in Microsoft Excel software and the results for Laser Haemorrhoidal Procedure were calculated.

**Results**

A total of 105 patients were included in the study. Various complications arising out of the procedure were documented as in the following table. The complication rates were found to be very low, with good percentage of subjects reporting no complications, emphasizing the role of Laser Haemorrhoidal Procedure over conventional and stapler procedures in the management of Haemorrhoids.

COMPLICATION		NO. OF PATIENTS	PERCENTAGE
Post-operative Pain	 VAS 0	21	20%
	 VAS 1-3	84	80%
	  VAS 4-6	0	0%
	 VAS 7-9	0	0%
	 VAS 10	0	0%
Thrombosis		13	12.3%
Residual Skin Tag		30	28.6%
Recurrence		8	7.6%

**Conclusion**

Laser haemorrhoidoplasty is a minimally invasive surgical treatment of haemorrhoidal disease with little distortion of the anal canal and has good outcome, especially for first-, second-, and third-degree haemorrhoids. Advanced forms such as

grade 4 haemorrhoids and haemorrhoidal prolapse expose to complications under laser and remain as indications for removal by conventional surgery according to Milligan and Morgan. The most frequently reported complications are persistent skin

tags, thrombosis and early or delayed bleeding in rare cases.

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