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ORIGINAL ARTICLE

LIGASURE (PRECISION) HAEMORROIDECTOMY AT GOVT. GENERAL HOSPITAL

Anand Morri[1], K. B. S. Prabhakar[2], Siva Sankar Rao Kurra[3]

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ABSTRACT: BACKGROUND: Haemorrhoids is a common problem throughout the world. Many procedures are available for management of grade II and grade III hemorrhoids. The main postoperative complications associated with any of these procedures are pain and bleeding per rectum and prolonged healing time. Liga Surel™ haemorroidectomy was evaluated in this study for post-operative complications and symptomatic relief. **METHODS:** We analyzed 50 patients of hemorrhoids of grade II, III and IV who underwent Ligasure Precise haemorroidectomy by a classical Milligan-Morgan technique. The outcome factors analyzed were total operative time, blood loss, post-operative pain on visual analogue scale, any other complication and days of hospital stay. **RESULTS:** Of all the 50 patients, the operative time was less than 10 minutes in 27 patients (54%) and the blood loss, as was measured by number of soaked gauze pieces only one gauze piece was soaked in 31 patients (62%). The Average Post-operative pain score measured on Visual Analogue Scale (VAS) at 12, 24 & 48 hours were 6.54, 4.52 and 3.12 respectively. In all patients postoperative period and follow up was uneventful except for one patient who developed transient flatus incontinence. With physiotherapy and dietary management this problem resolved thereafter. **CONCLUSIONS:** Liga Sure Hemarrhoidectomy is a safe, Technically easy and fast modality of treatment for 2nd, 3rd & 4th degree of hemorrhoids whether single or multiple, requiring very less operating time, with no major post-operative complications and early return to day to day activities.

KEYWORDS: LigaSure (Precise), Hemorrhoids, Haemorroidectomy.

INTRODUCTION: Hemorrhoid is a common problem throughout the world population. Majority of patients present with bleeding per rectum or mass per rectum, pruritis and pain in the rectum in daily out-patient department. Various modalities in the form of classical open Milligan-Morgan operation, harmonic scalpel, LigaSure(Precise), cryoablation, LASER, stapler haemorroidectomy, etc. are available for management of Grade II, III and IV hemorrhoids.[1,2] The major complications after any of the above mentioned modalities is post-operative bleeding and pain, incontinence, delayed wound healing.

Liga Sure(Precise) is an energy source which works like a bipolar mode of cautery achieving effective ccoagulation and thrombosis of the vessels at the same time. The spread of current is just 1.5±0.8 mm that includes diameter of 7mm blades. This is responsible for less adjacent tissue trauma thereby lowering the incidence of prolonged wound healing time, bleeding and pain and subsequently early return to day to day activities.[1,3,4,5]

This prospective study carried out at government general hospital over 2 years. All the patients presenting with bleeding per rectum were analyzed.

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Inclusion Criteria: All patients clinically and proctoscopically diagnosed as grade II, III and IV hemorrhoids presenting with bleeding per rectum were included in the study. Flexible sigmoidoscopy performed when there was a doubt.

Exclusion Criteria: All the patients with previous anorectal surgeries or with co morbid conditions and unfit for anesthesia and not willing for study were excluded from the study.

Procedure: For this study, a detailed proforma was prepared. In all the patients their presenting complaints, clinical and per rectal findings, investigations, intra operative findings, treatment, pain scoring using Visual Analogue Scale (VAS) and a note on post-operative complication were made. All the cases were called for follow up at monthly intervals for three months and their clinical condition were recorded.

The outcome factors analyzed were:

1. Total operative time.
2. Total intra operative blood loss.
3. Post-operative pain recorded at 12 hours, 24 hours & 48 hours on VAS.
4. Any post-operative complication in the form of bleeding or urinary retention or constipation.
5. Number of days of hospital.
6. Number of days taken to wound healing.

RESULTS: Total 50 patients were enrolled during the period of two years. 32(64%) were males. Bleeding per rectum was the chief presenting complaint of all the patients, while 29 patients presented with something coming out of rectum, 23 patients presented with pain during defecation and 16 patients presented with associated chronic constipation. Total operative time was less than 10 minutes in 27 patients (55.76%) and 10 to 20 minutes in 23 patients (44.23%). Intraoperative blood loss was measured by number of gauze pieces soaked. In 33 patients (63.46%) only one gauze piece was soaked, in 16 patients (30.76%) less than 5 gauze pieces were soaked and in only 3 patients (5.76%) more than 5 gauze pieces were soaked (Figure 1).

Post-operative pain was measured on Visual Analogue Scale (VAS) in all the patients at 12 hours, 24 hours and 48 hours postoperatively. A VAS score of more than 6 was observed in 33 patients (63.46%) 12 hours postoperatively, in 24 patients (46.15%) 24 hours postoperatively and only in 8 Patients (15.38%) 48 hours after surgery. This shows that with time number of patients having a VAS score between 6 -10 decreases

The average post-operative pain score on VAS at 12, 24 & 48 hours were 6.54, 4.52 and 3.12 respectively. None of the patients had post-operative bleeding or urinary retention. Only one patient developed transient incontinence for few weeks and recovered with physiotherapy.
In 42(84%) patients wound healed in 10days rest of the cases took 2 weeks.

DISCUSSION: Haemorroidectomy is the treatment of choice for grade II, III and IV hemorrhoids. The major complication for any modality of treatment is post-operative pain. Ligasure (Precise) coagulates the tissue and vessels effectively and thrombose the hemarroidal

vessels. Then it can be easily cut and excised. Unlike traditional milligan morgan technique does not require extensive dissection. Moreover its curved blades allow to dissect the tissue easily if necessary. No need of ligation and excision. Because of these reasons post-operative pain is less and early recovery occurs.[6]

In our study, 50 patients underwent LigaSure Hemorrhoidectomy. The operative time for 23 patients (46%) having single haemorrhoid was less than 10 minutes, whereas in 27 patients (54%) as multiple haemorrhoids were present operating time was more than 10 minutes. None of the patient required an operative time of more than 20 minutes which is comparable with the study done by Sayfan Joel et al. and Kwok SY et al.[3,2] The blood loss as was estimated by number of gauze pieces soaked also showed that in 31 patients (62%) hardly one gauze piece was soaked. A study by Tsunoda et al. showed that the average blood loss during harmonic scalpel haemorroidectomy was less than 5 ml which also makes this procedure bloodless.[7,8] In only 3 patients (6%) the number of gauze pieces soaked were more than 5, the reason being presence of multiple haemorrhoids with external component. Post-operative pain was analyzed by using Visual Analogue Scale (VAS) at 12, 24 and 48 hours postoperatively. Out of 50 patients, 31 patients (62%) had a VAS score of more than 6, twelve hours postoperatively. However, this figure got reduced to 8 patients (15.38%) 48 hours after surgery. These 8 patients were discharged on 5th postoperative day when their pain was completely subsided as compared to rest of the patients who were discharged between 2nd to 4th post-operative days. The average post-operative pain score on VAS at 12, 24 & 48 hours were 6.54, 4.52 and 3.12 respectively. None of the patient developed urinary retention or post-operative bleeding per rectum in immediate post-operative period or on subsequent follow up period of 3 months.

CONCLUSION: This study shows that Liga Sure Hemorrhoidectomy is a safe and effective surgical modality.[5,9,8] for 2nd, 3rd & 4th degree of hemorrhoids whether single or multiple, requiring very less operating time, with no major post-operative complications and early return to day to day activities

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AUTHORS:

1. Anand Morri
2. K. B. S. Prabhakar
3. Siva Sankar Rao Kurra

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of General Surgery, Siddhartha Medical College, Vijayawada.
2. Associate Professor, Department of General Surgery, Siddhartha Medical College, Vijayawada.
3. Professor, Department of General Surgery, Siddhartha Medical College, Vijayawada.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Anand Morri,
Associate Professor,
Department of General Surgery,
Siddhartha Medical College,
Vijayawada.
E-mail: anandmorri@yahoo.com

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