

# Management Of Haemorrhoids By Trans Anal Suture Rectopexy [Chivates Procedure]: Experience At A Tertiary Care Center

Dr. R. Jaswanth<sup>1\*</sup>

Dr. G. Akhilesh<sup>2</sup>

Dr. Darivemula Israel<sup>3</sup>

(Postgraduate<sup>\*1</sup>, Postgraduate<sup>2</sup>, Postgraduate<sup>3</sup>)

Department Of General Surgery, Osmania Medical College, Hyderabad, Telangana, India)

---

## Abstract:

**Background:** Haemorrhoids can occur at any age, and they affect both men and women. Most of the haemorrhoidal surgeries have many post-op complications, prolonged hospital stay and analgesic need. To overcome this post-op morbidity and long term recurrence, a new surgical method was devised by D. Chivates. This procedure includes trans anal circumferential suturing of lax mucosa and submucosa of rectum. The main etiological factor for the development of recurrence of haemorrhoids is, the development of collaterals. The current study was undertaken to know the outcomes of patients who underwent Chivates procedure.

## Objectives:

1. To assess the incidence of post-op complications like pain, bleeding, incontinence, urinary retention, prolapse and etc.

2. To assess the need for analgesic medications and duration of hospital stay.

**Materials and Methods:** 60 patients were included. This interventional study was done in the Department of General Surgery at Osmania Medical College and General Hospital, Hyderabad, Telangana, India. Male and females aged above 18 years with haemorrhoids were included. All patients underwent the Chivates procedure as surgical procedure for their haemorrhoids.

**Results:** Most of the patients belonged to the age group 41 to 50 years, followed by 51 to 60 years. 60% of the patients were males. Most of the haemorrhoids had grade 3 haemorrhoids. Most common symptom was constipation, followed by bleeding per rectum and prolapse. Bleeding was seen among 8% of patients in the postoperative period.

**Conclusion:** Chivate's transanal suture rectopexy for haemorrhoid is a cheap, very painless, simple stitching procedure and the learning curve is minimal with very less post-operative complications.

**Keywords:** Haemorrhoids, Surgery, Constipation, Chivate procedure, Collaterals, Complications

---

Date of Submission: 19-06-2024

Date of Acceptance: 29-06-2024

---

## I. Introduction

Haemorrhoids are common human afflictions known since the dawn of history. About half of the population has haemorrhoids by the age of 50 years.<sup>1</sup> Almost one third of these patients present to surgeons for treatment. They can affect people of any age, and both genders. Intense study of pathology of haemorrhoids was carried in the last 35 years, which led to renew interest in, by which the development of innovative procedures occurred.<sup>2-4</sup> Three anal cushions are present in respective to the superior rectal end arteries at 3, 7, and eleven o'clock in the lithotomy position. The main part of the cushion lies just above the dentate line and is covered by sensitive mucosa. On cross-section between the cushions and internal sphincter muscles is the submucosal layer, which consists of veins, arteries and muscular and connective fiber tissues. The piles mass is supported by fibroblastic collagen tissue and the muscular structure of Treitz (muscularis canalis ani)<sup>5</sup>. The venous plexus present in the form of sinusoids is known as 'corpus cavernosum of recti'. Special consideration of mass, prolapse and recurrence is required for the successful cure of piles. The pressure of the haemorrhoidal plexuses is increased due to activities like straining and sitting for long periods during bowel movements, obesity lifting heavy objects, and severe coughing. Straining during defecation causes the anal sphincters to relax and simultaneously portal veins that are without valves are engorged. The veins that exit through the seromuscular wall of the rectum drains into the portal tributaries. These portal veins are trapped and blocked in the seromuscular wall during strong contraction of the rectum during defecation. At the same time, arterial blood

supply is continued, which keeps on engorging haemorrhoidal plexus and piles mass progressively<sup>6</sup>. Rectal bleeding is the main symptom of internal haemorrhoids. The blood is characteristically bright red. It has been suggested that the internal haemorrhoid plexus is like corpus cavernosum with direct arteriovenous communications<sup>7</sup>. The blood is filtered without metabolic activity and, therefore, it remains arterial, which is bright red in appearance and has a pH of arterial blood<sup>8</sup>. The vascular theory explains why piles mass increases in size. All the existing procedures have a recurrence rate varying between 18% and 60%. It is difficult to assure the patient that haemorrhoids are curable. In all procedures, haemorrhoidal vessels are occluded at one place and that is the major cause of recurrence. The end result is physical enlargement of these collaterals that allow increased forward flow to nourish the area distal to the obstruction<sup>9-11</sup>. The main reason for the development of recurrence is development of collaterals in all current surgical procedures. To overcome recurrence, a new surgical method was devised by D. Chivate. This procedure includes trans anal circumferential suturing of lax mucosa and submucosa of rectum.

**Objectives:**

1. To assess the incidence of post-op complications like pain, bleeding, retention of urine, incontinence and prolapse.
2. To assess the need for analgesic medications and duration of hospital stay.

**II. Materials And Methods**

**Study design:** hospital based prospective observational study

**Source of study population:** patients admitted with haemorrhoids at ogh, hyderabad.

**Study period:** 18 months

**Sample size:** 60

The assumptions for calculation of sample size for a descriptive study were as follows:

Minimum sample size was 54 subjects at 95% confidence limit and 3% absolute allowable error assuming 92.8% surgeries performed were painless. Assuming 10% attrition rate sample size was increased to 60 subjects.

**Type of study:** interventional study

**Ethical approval:** ethics approval was taken before conducting the study.

**Inclusion criteria:**

All patients who visited at surgical opd with a history of per rectal bleeding having hemorrhoids of

1. Age group >18years
2. Both genders
3. Associated mucosal prolapsed.

**Exclusion criteria**

1. Thrombosed grade 4 pile
2. Perianal hematoma and ulcerated pile
3. Previous perianal surgeries
4. Patients using anticoagulants.
5. Haemorrhoids with fistula.

**Statistical analysis:** analysis was done using microsoft software. Mean, sd, percentages, and frequencies were used.

**III. Results**

**Age and gender:**

Most of the patients belonged to the age group 41 to 50 years, followed by 51 to 60 years 60% of the patients were males.

AGE	No. of Patients	Percentage
41 TO 50	40	66%
51 TO 60	11	16.6%
ABOVE 60 YEARS	9	15%
Total	60	100%

**Table 1: Age distribution of patients**

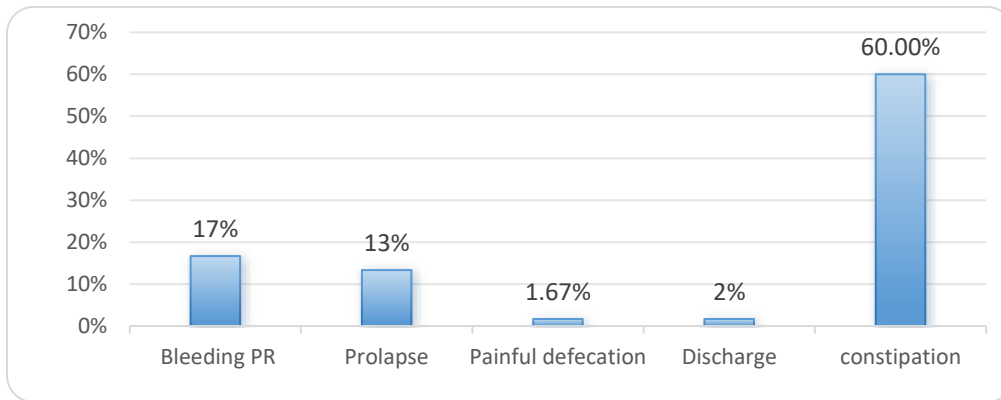
**Grade of haemorrhoids:**

Most of the patients had grade 3 haemorrhoids.

Grade of Haemorrhoids	No. of Patients	Percentage
II	12	20%
III	30	50%
IV	18	30%
Total	60	100%

**Table 2: Grade of haemorrhoids**

**Presenting Symptoms:** Most common was constipation, followed by bleeding per rectum and prolapse.



**Graph 1: Symptoms seen among patients**

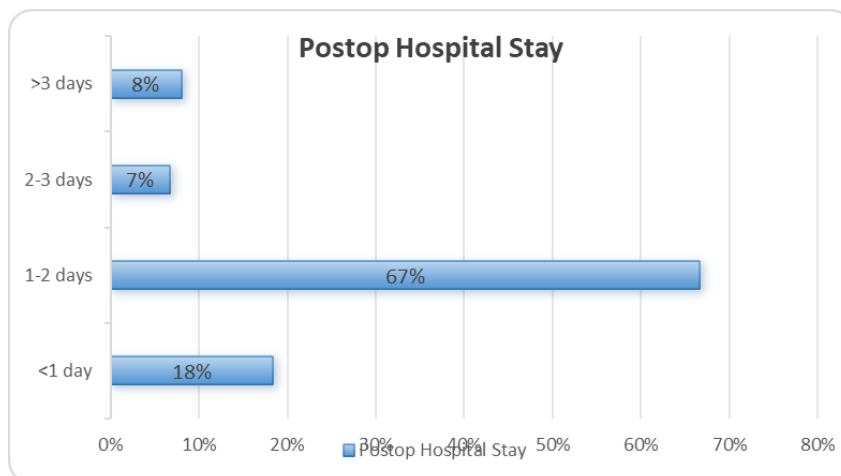
**Type of anaesthesia:** Spinal anaesthesia.

**Post operative complications:** Bleeding was seen among 6.67% of patients in the postoperative period.

Postoperative Complications	No. of Patients	Percentage
Pain	1	6%
Bleeding	4	6.67%
Incontinence	1	1.67%
Retention of urine	4	6.67%
Prolapse	1	1.67%

**Table 3: Postoperative complications seen**

**Duration of hospital stay:** 8% of the patients stayed for more than 3 days after surgery. Most of the patients got discharged in 2 to 3 days



**Graph 2: Duration of hospital stay**

**Pain was controlled by routine analgesics in majority of patients (90%)**

#### **IV. Discussion**

In the new procedures, simple suturing was done at 2 and 4 cm levels proximal to the dentate line. The sutures were above the dentate line which concluded in pain free postoperative as well as later on. Milligan procedure is very painful requiring 3-5 days of hospitalization and sedations. The patients avoid not only surgery but also the surgeons. Stapled haemorrhoidopexy, developed by Longo in the 1990s, decreases prolapse by stapled mucosectomy 4 cm above the dentate line. The procedure is confined to the area above the dentate line, should give no pain. But the reoperation rate after stapled haemorrhoidopexy was 11% and the most frequent indications for reintervention were persistent, severe anal pain (visual analogue pain score higher than 7). Morinaga reported a new technique in 1995 for treating hemorrhoids. It was used for the identification of haemorrhoid arteries. In this procedure, the located arteries are ligated by the figure of eight sutures, 4 cm above the dentate line, which is a pain-free area. The procedure recto-ano repair for grade III and IV haemorrhoids is involved in plication of anal mucosa, and cannot be pain-free.<sup>12</sup>

A recent meta-analysis comparing surgical outcomes between stapled haemorrhoidopexy (SH) and haemorrhoidectomy, which included 10 publications, showed that SH causes less pain, with quick return of bowel function, less duration of hospital stay, and better wound healing, along with more degree of patient satisfaction. SH is usually reserved for patients with prolapsing haemorrhoids and who have  $\geq 3$  lesions of advanced internal haemorrhoids.<sup>13</sup>

Most of the patients belonged to the age group 41 to 50 years, followed by 51 to 60 years. 60% of the patients were males. Most of the haemorrhoids had grade 3 haemorrhoids. Most common presenting symptom was constipation, followed by bleeding per rectum and prolapse. Most of the patients were operated under spinal anaesthesia. Bleeding was seen among 6.67% of patients in the postoperative period. 6% of the patients stayed for more than 3 days after surgery. Most of the patients got discharged in 2 to 3 days. Pain was controlled by routine analgesics in the majority of patients.

D. Chivate et al conducted a study on 166 patients. 102 were males and 64 females, the mean age was 47.5 years; and the age ranged from 22 to 76 years. Grade 3 hemorrhoids were more commonly seen similar to the present study. Male preponderance was similar to the current study. In all the cases, frequent episodes of bleeding per rectum were noted. Postoperative, all the patients were discharged after 24 h, except for 2 cases. Postoperative bleeding was seen among 3 patients who required no treatment. The hemorrhoid masses were reduced 90% immediately postoperatively on the table, and further reduced in 3–7 days. The suture rectopexy for hemorrhoids had minor oozing from some stitches in 11% of cases during operation, which was controlled by compression. The small area of the mucosal tear noted in the early 3 cases required no treatment<sup>13</sup>. Mucosal oedema present in 6/166 cases requires no special treatment. The patients were called for follow-up after 1, 2, 4, 6, 12, 24 weeks and later on yearly communicated by post for 2 years. After 6 months in 3 cases, hemorrhoids of grade I without bleeding were noted. No ischemia or stenosis was observed in the 2 cm area between the two circumferential suturing lines on per rectal and proctoscopy examination. No recurrence of hemorrhoids or no incidence of impairment of continence was noted. Postoperative minimum pain was present in 12/166 cases. Oral antibiotics and analgesics were given to all the patients for 5 days. In the present study, mucosal edema was seen in any patient.<sup>14</sup>

#### **V. Conclusion**

Chivate's transanal suture rectopexy for haemorrhoid is a cheap, painless, very simple stitching procedure and the learning curve is minimal with very less post-operative complications. It has equal successful outcomes in all grades of hemorrhoids and similar results were achieved. It is relatively safe and better in terms of post-operative complications than other techniques.

The study is self-sponsored.

There were no conflicts of interest.