

Outcome of Minimally Invasive Proctology (MIP) in a Daycare Unit

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Abstract

Introduction: In Colo-proctology, the high incidence of Ano-rectal diseases and the economic impact of various types of surgical treatments have motivated attempts to discover possibilities of Outpatient management of these Ailments. The advent of Minimally Invasive Procedures (MIP) and recent technological advances have made feasible the treatment of these conditions in the scope of day care Surgery.

Aims: In this study we evaluate our experience in an Outpatient unit solely dedicated to the Ambulatory treatment of Benign Anorectal disease by Minimally Invasive Procedures.

Material and Methods: It's a retrospective study which includes 8420 patients who underwent various Day care Procedures at Treat Piles Clinic from 2012-2019. Patients who underwent LHP, DG HAL-RAR, lateral Internal Sphincterotomy, FiLAC and SiLaT for Grade 2-3 Hemorrhoids, Grade 4 Hemorrhoids, Anal Fistula and Pilonidal Sinus respectively were evaluated for the Outcome, Complications, Recurrence rate and the need for Readmission. Patient Groups: Group A: Patients with Hemorrhoidal Disease; Group B: Patients with Anal Fissure; Group C: Patients with Anal Fistula; Group D: Patients with Pilonidal Sinus.

Results: Group A: A total number of – patients were treated for Hemorrhoidal Disease by various Minimally invasive techniques and were followed up for a period of --months. 18% (631) of the patients were previously operated by conventional method. Gr1 Hemorrhoids: IRC was performed in 256 patients which showed complete resolution of symptoms in all the patients. There were no complications or Recurrence reported in this group. Grade 2 and 3: LHP alone was done in 1451 patients, in which complete resolution of symptoms was seen in 1296 patients within the 2nd postoperative week. Where as 126 patients complained of relapsing symptoms with relief after 4 postop weeks. Postoperative bleeding was reported in 12 patients on day 2-3; inflammatory edema was reported in 7 cases, while Rectal perforation was reported in 1 patient who was a known Alcoholic and Smoker with history of Cirrhosis. Recurrence was seen in 1% (29) of the cases. Readmission was required in 3 cases, for supportive treatment. DG HAL RAR alone was done in 1800 patients, out of which 1280 recovered completely by 1st postop week, while 484 patients had relapsing symptoms which subsided by 3rd postop week. Rectal tear was reported in 2 patients. Postop Recurrence was reported in 2%(36) patients.

Group B: Chemical Sphincterotomy was performed in 260 patients and complete healing of Fissure was reported in –patients at day—and persistent symptoms were reported in 2% (5) patients. Percutaneous Minimally invasive laser Sphincterotomy was done in 2850 patients, with resolution of symptoms in all the cases by 3rd postop week. No recurrence was reported.

Group C: 1420 patients underwent FiLAC procedure for Anal Fistula out of which 70% (994) patients had previously been operated for Anal Fistula at other Centers. The mean follow up time was 18 months. Primary healing of the Fistula Tract was observed in 1321 patients; while recurrence occurred in 99 cases (7%) after a mean period of 2 months.

Group D: A total number of 383 patients with Pilonidal Sinus underwent Sinus Tract Ablation procedure, primary healing of the tract was reported in 368 patients while recurrence was seen in 15 cases (4%)

Conclusion: Ambulatory treatment of Anorectal diseases by Minimally invasive Procedures have good results with minimal complication rate, recurrence and hospitalization. The outcome of the procedures are only expected to be improved by the increasing experience.

Keywords: Minimally Invasive Procedures; Patients; Disease

Introduction

The prevalence of Benign Anorectal disorders is common among all age groups and the treatment is often associated with painful recovery, long hospitalization and postop complications. With the advent of new procedures, it is now feasible to treat these diseases under the scope of Day care procedures with appealing results.

The fast pace of life, adoption of nuclear family structure, need of early return to work, and resumption of daily routine chores to maintain social and professional competitiveness, are few of the important factors which have propelled this treatment modality to newer heights [1].

Advantages of minimally invasive proctology

- Ambulatory treatment
- Short-term general anesthesia or locoregional anesthesia which allows almost total absence of pain in the first 12 postoperative hours
- Modern techniques, often without operative wound on the outside, using new generation devices
- Fast recovery: 70-90% after only 3-4 days
- No food or mobility restrictions
- Less recurrence due to the techniques used as well as careful and constant postoperative monitoring
- Aesthetic pleasing results (knifeless).

Aim

MATERIAL AND METHODS: We have been running an outpatient clinic for Proctology since 2012, with increasing experience and confidence we have been able to perform Surgical procedures for Hemorrhoids, Anal fissure, Pilonidal sinus and Anal Fistula on an outpatient basis.

This is a retrospective descriptive Case series of all the Day care Surgeries performed from 2012-2019 at Treat Piles Clinic which includes a total number of 8420 patients (4438 males and 3982 females) with mean age of 38 years (Range 17-82), who were treated for Hemorrhoids (3507), Anal Fissure, (3110), Anal Fistula (1420) and Pilonidal Sinus(383) by various Minimally invasive Procedures:

- DG HAL RAR and Laser Hemorrhoidoplasty for Hemorrhoids

- Chemical Sphincterotomy with Botox and Minimally invasive closed Laser Internal Sphincterotomy for Anal Fissures
- FiLAC Fistula tract Laser closure for Anal Fistula
- SiLaT (Sinus Tract Laser Ablation Treatment) for Pilonidal Sinus.

All the Procedures except Chemical Sphincterotomy were done under Spinal Anesthesia and the patients were discharged in accordance with the protocols proposed by The International Association for Ambulatory Surgery and The Indian Association of Day Surgery.

The follow up period was about 18months during which the patients were assessed primarily for the success rate, postop complications recurrence and the need for readmission.

Results

- **Group A:** A total number of – patients were treated for Hemorrhoidal Disease by various Minimally invasive techniques and were followed up for a period of --months. 18% (631) of the patients were previously operated by conventional method. Gr1 Hemorrhoids: IRC was performed in 256 patients which showed complete resolution of symptoms in all the patients. There were no complications or Recurrence reported in this group. Grade 2 and 3: LHP alone was done in 1451 patients, in which complete resolution of symptoms was seen in 1296 patients within the 2nd postoperative week. Where as 126 patients complained of relapsing symptoms with relief after 4 postop weeks. Postoperative bleeding was reported in 12 patients on day 2-3; inflammatory edema was reported in 7 cases, while Rectal perforation was reported in 1 patient who was a known Alcoholic and Smoker with history of Cirrhosis. Recurrence was seen in 1% (29) of the cases. Readmission was required in 3 cases, for supportive treatment.DG HAL RAR alone was done in 1800 patients, out of which 1280 recovered completely by 1st postop week, while 484 patients had relapsing symptoms which subsided by 3rd postop week. Rectal tear was reported in 2 patients. Postop Recurrence was reported in 2%(36) patients.
- **Group B:** Chemical Sphincterotomy was performed in 260 patients and complete healing of Fissure was reported

ed in –patients at day—and persistent symptoms were reported in 2% (5) patients. Percutaneous Minimally invasive laser Sphincterotomy was done in 2850 patients, with resolution of symptoms in all the cases by 3rd postop week. No recurrence was reported.

- **Group C:** 1420 patients underwent FiLAC procedure for Anal Fistula out of which 70% (994) patients had previously been operated for Anal Fistula at other Centers. The mean follow up time was 18 months. Primary healing of the Fistula Tract was observed in 1321 patients; while recurrence occurred in 99 cases (7%) after a mean period of 2 months. No postop incontinence to stool or flatus was reported in any case.
- **Group D:** A total number of 383 patients with Pilonidal Sinus underwent Sinus Tract Ablation procedure, primary healing of the tract was reported in 368 patients while recurrence was seen in 15 cases (4%).

Anorectal Disorder	Success Rate	Recurrence Rate	Need for Re-admission	Complications
Hemorrhoids	97%	3%	3 cases	3 cases
Anal Fissure	98%	2%	-	-
Anal Fistula	93%	7%	-	-
Pilonidal Sinus	96%	4%	-	-

Table

Discussion

Day care surgery is a fast-growing concept of dispensing planned surgical care to select the group of patients. The past decade has seen a rapid and well-accepted increase in day care surgery and centers, specializing in its practice [2].

Carditello A, had described in his study the feasibility of ambulatory hemorrhoidectomy after he successfully treated 500 patients back in 1993 [3]. At our Day care Clinic, we have successfully treated 8000 patients with various spectrum of Anorectal diseases by Minimally invasive techniques over 7 years. The use of modern knifeless procedures lead to minimal or no postop pain allowing early mobilization of the patient and aesthetic pleasing wound.

The results of Ambulatory Surgery about a decade ago, as described by

With the upcoming advances in the treatment modalities of Hemorrhoids and the increasing understanding and experience of its applications, increase in success rates has been reported over the years. In 2011, Ursula Maria Szmulowicz in his study reported a recurrence rate of 21% after DG HAL RAR [4]; whereas in our study, the recurrence rate was 2% with the use of DG HAL RAR, and 1% with Laser Hemorrhoidoplasty.

The Treatment options for Anal Fissures include Chemical Sphincterotomy with Botulinum Toxin and Percutaneous (Closed) Internal sphincterotomy. The use of Botulinum Toxin in the treatment of Anal Fissure has gained popularity only in the past few years, prior to which it was reported to be ineffective in relieving the symptoms, consequently leading for the need to operate [5]. In our Study, the use of Botulinum Toxin was successful in treating the Fissure, with complete resolution of symptoms in 98% of the patients and recurrence of only 2%.

Our outcome for Laser procedure for Fistula Closure had successful outcome with primary healing of the tract in 93% of the patients, 70% of whom were previously operated by conventional Surgery where as the success rate of FiLAC as reported by Giamundo P, in his study back in 2015 reported the best healing rate of only 79% [6].

SiLAT is an upcoming procedure for the treatment of Pilonidal Sinus. In our study, 383 patients underwent the procedure with a healing rate of 96% and recurrence was observed in 4%.

Conclusion

Ambulatory treatment of Anorectal diseases by Minimally invasive Procedures have good results with minimal complication rate, recurrence and hospitalization. The outcome of the procedures is only expected to be improved by the increasing experience.

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