Feasibility of Day Care Surgery in Proctology

Pravin J. Gupta

Gupta Nursing Home, Nagpur, India

Abstract

Background. Proctological surgery is being carried out increasingly on an outpatient basis. The reasons for this are safe anesthetic procedures, short operation times and low complication rates. This study is a retrospective analysis of complication rates, symptom recurrence and long-term results according to outpatient proctologic surgery practiced in our hospital in the last 10 years. Material and method. A total of 2840 patients were operated and followed up. The procedures included hemorrhoidectomy, anal fistulotomy, sphincterotomy, and removal of rectal polyps, pilonidal sinotomy and anal stricturotomy. Procedures were performed either under short-term general anesthesia or regional block. Results. Mean hospital stay was 7.3 hours (range 4-21 hours). The overall complication rate was 2.5%, which included bleeding, urinary retention, infection, continence disturbance and recurrence. Conclusion. Outpatient proctological surgery can be safely performed with a low recurrence and complication rate while offering a high level of patient acceptance and satisfaction. However, an appropriate diagnosis of the disease, proper selection of the patients with respect to their suitability for surgery and a round-the-clock availability of patient communication with the nursing staff are a must for the successful outcome of the procedure.

Key words
Proctology - day care - ambulatory - outpatient - anal

Introduction

A day care clinic is defined as an institution in which patients undergo elective operations the day of their admission and are discharged within 24 h after surgery (1). An important goal of day care surgery is to avoid unnecessary hospitalization, while providing the patient with the same quality of treatment and personal satisfaction as is given to inpatients (2).

As a general practice, the majority of surgeons prefer to carry out surgeries even minor ones at large multispeciality hospitals. This practice vastly increases the cost of medical treatment and results in long waiting lists for hospital admissions. A significant number of procedures that do not require special equipment, preoperative preparation and hospital stay, are realized in these hospitals. This has resulted in long waiting lists for hospitalization, shortage of beds for major surgeries, high cost of bed/day, and a significant burden on limited resources, particularly in the developing countries (3).

This system of hospitalization with its elevated costs has determined the need for a revision of these concepts, culminating in many surgical procedures moving from the hospital environment to the outpatient sector. The rediscovery, improvement and broadening of outpatient resources and utilities have occurred during the last four decades, more precisely starting in 1961 when the first modern program of outpatient surgery was created in Michigan (USA). Two other great centers, one at the University of California (Los Angeles) and the other in Phoenix (Arizona), USA, followed this trend (4). The good results achieved by these centers stimulated the interest of other hospitals throughout the world.

In coloproctology, the high incidence of anorectal diseases and the economic impact of various types of surgical treatment have motivated attempts to discover possibilities of outpatient management of these ailments. While 30-50% of all surgeries can be safely realized in outpatient sectors, this rate reaches 90% in the case of anorectal operations (5). Despite the social, economic and medical advantages reported by various authors, the majority of surgeons are loath to put this into practice, either because of the difficulty in assuring adequate pain control, or for fear of postoperative complications, or the resistance of many patients for lack of dissemination knowledge about safety and feasibility of day care surgeries. An additional
reason could be the lower payment made by health insurance plans erroneously treating outpatient surgeries as minor and low risk procedures (6).

Among all the surgical specialities, anorectal surgery has benefited the most from the use of local anesthesia and ambulatory surgery. Many studies agree that the outpatient environment is safe for anorectal surgery (7).

We have been running an outpatient clinic for proctology since 1996, and with increasing experience and confidence we have been able to perform most of the anorectal surgical procedures on an outpatient basis. In the present study, we evaluate our experience in an autonomous outpatient unit solely dedicated to the ambulatory treatment of anorectal disease.

Material and method

We reviewed the records of all the patients who underwent anorectal procedures in our ambulatory unit between April 1996 and March 2006. Data was collected on the age of patients, gender, associated illnesses, preoperative evaluation, type of anesthesia used and treatment provided.

The cases that were excluded from this study comprised minor procedures performed during consultation such as endoscopies, infrared or radiofrequency coagulation of hemorrhoids or their band ligations, evacuation of perianal hematomas or hemorrhoidal thrombectomies and all major procedures such as extensive rectal surgeries that required long hospital stay.

The criteria for selection of patients for outpatient proctology surgery were as follows:
- patients with a good control on systemic disease such as hypertension, diabetes or ischemic heart disease;
- patients corresponding to ASA I and II levels;
- patients who were not on anticoagulant therapy or had discontinued it a week prior to the procedure;
- patients accompanied by a responsible person to take him home and stay with him for the next 48 hours;
- assurance of active participation of family members in postoperative care;
- patients having easy access to toilet and telephone;
- availability of quick transport in case of emergency or complications;
- access to medical facilities round the clock in case of complications or emergency;
- patients literate enough to understand postoperative instructions and follow them scrupulously.

Preoperative investigations

All the patients were investigated with routine hemogram including hemoglobin level, bleeding and clotting time, blood glucose estimation and estimation of HIV and HBsAg. Patients over 35 years of age were evaluated by a physician to rule out cardiac or other systemic disease.

The patients received 17.5 g of polyethylene glycol solution the night before surgery. No enema was given. Patients fasted from the morning on the day of surgery and were asked to pass stool and urine before the procedure.

Anesthesia

Most of our operations were performed using a short-term general anesthesia with muscle relaxants. Caudal block was used for patients who were not found suitable for general anesthesia.

Organization of procedures

Patients were admitted in the hospital an hour prior to the procedure. Most of them were operated in lithotomy position. Jack-knife position was the next common operative posture. The operative field was not shaved except in cases of pilonidal sinus disease.

After disinfection of the operative field, the procedures were carried out. No intra-anal dressing was given excepting coverage of external wounds by an absorbent pad. Patients were kept under observation in the ward for the next 6 hours to contain vomiting, urinary retention, pain or post anesthesia events if any. The wounds were checked and the dressings were renewed if found necessary in case of undue bleeding or soiling.

The patients received a leaflet exhaustively detailing essential post-operative care along with dietary instruction and a detailed prescription for sitzbath, dressing, application of ointments, analgesics, and laxatives. They were provided with a telephone number to call any time in case of encountering any complication or query regarding postoperative care. The patients were discharged once they passed urine, had started taking oral feeds and been administered a dose of analgetics and were able to go to the toilet alone and dress themselves.

Postoperative care

The patients were instructed to take a warm water sitzbath immediately after each defecation and again at bedtime. They were asked to apply a cream containing local anesthetics and antiseptics twice a day and as and when they felt pain or passed a stool. Systemic antibiotics were prescribed to patients who were operated for infective pathologies like anal fistula, abscess etc. Emphasis was placed on inducing an early bowel action and so the liberal use of fiber supplement and stool softeners was encouraged.

The control of post defecation pain is the most important issue in proctology. Patients were instructed to consume analgetics with impunity. The routine analgesics prescribed were paracetamol, tramadol and diclofenac sodium two to three times a day as required.

Follow-up

Patients were called back at 2 weeks post operation or earlier if required. The follow-up was carried out until the wound healed completely. All patients’ data was entered into a database and statistical analysis was performed using statistical software (Graph pad Software, San Diego, CA).

Results

This study included 2480 patients who underwent day care proctological surgery. Mean hospital stay was 7.3 hours.
They were appropriately treated. Eleven patients presented recurrence. Three of them had this complication after sphincterotomy for anal fissures while the next common surgical procedure was for removal of hemorrhoids. There were no episodes of vomiting or nausea that prevented discharge. Sixty-two (2.5%) of our patients had post-operative complications. Of these, 49 were considered minor and only 13 had major complications that required hospital admission. Of the minor complications, urinary retention, wound infection, perianal thrombosis and continence disturbances were the most common. Urinary retention was treated with urinary bladder drainage for one time. None of the patient needed a dwelling catheter. The patients with perianal thrombosis were reassured and the thrombosis resolved by its own in two weeks. Table II.

Table II Complications after the proctological procedures in 2480 outpatient

<table>
<thead>
<tr>
<th>Complication</th>
<th>No. patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary retention</td>
<td>14</td>
<td>0.5%</td>
</tr>
<tr>
<td>Continence disturbance</td>
<td>13</td>
<td>0.5%</td>
</tr>
<tr>
<td>Recurrence</td>
<td>11</td>
<td>0.4%</td>
</tr>
<tr>
<td>Bleeding needing readmission</td>
<td>9</td>
<td>0.3%</td>
</tr>
<tr>
<td>Infection</td>
<td>8</td>
<td>0.3%</td>
</tr>
<tr>
<td>Hematoma/thrombosis</td>
<td>7</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Of the 13 patients with major complications, nine patients returned with secondary bleeding. They were readmitted. While seven of them were resolved with conservative treatment in the form of local compression, hemostatic medication and rest, two required examination under anesthesia with ligation of the vascular pedicle. None of these patients needed a blood transfusion. Another four patients had septic complications leading to perianal abscess. Three of them had this complication after sphincterotomy for anal fissure and the fourth one had been operated for hemorrhoids. These patients were treated with incision, drainage and antibiotics. They had uneventful recovery thereafter. Eleven patients presented recurrence. They were appropriately treated.

No significant correlation was found between factors such as the type of surgery, the postoperative visits by the patients, complications reported and the need for admission to the hospital.

The distribution of the patients with various ano-rectal pathologies attending the clinic is illustrated in Table III.

Table III Distribution of various pathologies operated at day care proctology clinic

<table>
<thead>
<tr>
<th>Pathology</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anal fissure</td>
<td>45</td>
</tr>
<tr>
<td>Hemorrhoids</td>
<td>30</td>
</tr>
<tr>
<td>Anal abscess</td>
<td>20</td>
</tr>
<tr>
<td>Anal fistula</td>
<td>10</td>
</tr>
<tr>
<td>Pilonidal sinus</td>
<td>5</td>
</tr>
<tr>
<td>Rectal mucosal prolapse</td>
<td>2</td>
</tr>
<tr>
<td>Anal stricture</td>
<td>1</td>
</tr>
<tr>
<td>Rectal polyp</td>
<td>1</td>
</tr>
</tbody>
</table>

Discussion

Proctology has acquired so much complexity that it calls for a specific educational qualification and the carrying out of a separate branch in the faculty of surgery dealing with ano-rectal problems (8). Day-care surgery is required equally in colorectal surgery just as in any other surgical discipline. It is estimated that 90% of anorectal surgery could be performed on an outpatient basis. Careful patient selection is the key to a successful outcome (9). The procedures requiring complicated and time-consuming postoperative care or special dietetic measures are required to be scrupulously excluded (10). All patients must be examined before the actual procedure, as sometimes a change in symptoms and signs may call for a modification in the choice of a procedure (11).

A day care surgery offers many advantages over the inpatient care as the patient’s life is only minimally disturbed with a diminished anxiety. The incidence of nosocomial infection is minimum. There is earlier return to normal activities and a reduced time off work. The patient is usually more comfortable at home. The significant reduction in treatment costs and minimal pressure on hospital resources are the two major achievements of the day-care surgeries. Morbidity rates in inpatient and outpatient surgeries are comparable (12).

The downsides of proctology surgery are its pain quotient and the lengthy time off work. If the operation can be performed with minimal postoperative discomfort and high patient satisfaction, then the patients would prefer a day care operation as against repeated office procedures or conservative therapy.

Most of our procedures were performed either with a short-term general anesthesia or regional blocks, as against the reported literature professing such procedures having been performed under local anesthesia or posterior perineal block (13,14). While local anesthesia has definite advantages in avoiding possible post-anesthesia complications, we preferred general or regional anesthesia taking into consideration the patients’ anxiety about the procedure,
an uncomfortable position in the operation room and sometimes need for an additional procedure requiring extension of duration of anesthesia etc.

The most common complications of proctology surgery include postoperative hemorrhage, retention of urine, infection and severe pain (15). The reasons for postoperative urinary retention are multiple and they comprise the amount of intravenous fluid administered perioperatively, dysfunction of the detrusor, reflex urethral spasm, clinically silent prostatic hypertrophy and fear of pain (16). Another important problem is the postoperative pain control. It can not be determined preoperatively if and how a patient will tolerate the postoperative pain and especially the one who is very sensitive (17). In our experience, adequate doses of analgetics did help the patients in coping with the pain. The usual anxiety in prescribing higher doses of analgetics lies in their adverse side effects such as nausea and dizziness, constipation and drop in blood pressure. However, such complications resulting from analgetic medications are tolerated well by patients in preference to undergoing the torturous pain in the postoperative course.

We insisted that the patients take warm water sitzbaths postoperatively. It is our experience that apart from giving relief from pain, it improves the local blood circulation augmenting the effect of medication. It also helps in cleaning the wounds without the need for any external assistance.

It can not be overemphasized that careful patient selection, meticulous surgery with minimal tissue damage, optimal wound care, appropriate postoperative analgesia and raising patient’s confidence are the key to any successful proctological outpatient surgery (18). Strict instructions should be given to the patients about postoperative care, local hygienic measures, dressings, consumption of analgetics, physical exercise, good food habits and adequate measures to avoid constipation (19,20).

In conclusion, the overall experience in our day care proctology unit has been very satisfactory both for patients and physicians. Nonetheless, a thorough explanation of all aspects of this surgery is important, and an effective communication system between the patient and the hospital staff is essential for the success of all day care surgeries.

References