

Rectal prolapse: Diagnostic and therapeutic management in the visceral surgery department of the Donka National Hospital, University Hospital Centre in Conakry

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Abstract

Introduction: Rectal prolapse (RP) is a disorder of the rectum's statics, resulting in its externalisation through the anus. It is the protrusion of the rectum through the anus [1]. The progression may remain limited to the rectal ampulla (internal RP), extend into the anal canal, or protrude externally (external RP) [2]. There are two types of rectal prolapse. Mucosal prolapse is the permanent or exertion-induced protrusion of the mucosal layer of the anal canal through the anus [3], and total or complete prolapse is the protrusion of all the layers of the anal canal (mucosal, muscular and serosal) through the anus [3]. Long considered a rare condition, rectal prolapse is becoming increasingly common, with an estimated incidence of 1/1000 in the global population and varies from region to region [4].

Methods: This was a retrospective descriptive study covering a five-year period from 1 January 2016 to 31 December 2020. It included all patient records for patients diagnosed with rectal prolapse who underwent surgical treatment during the study period. Any incomplete records were excluded from the study. Recruitment was exhaustive and included all patient records admitted to the department for rectal prolapse during the study period.

Results: total records N=2000, rectal prolapse N= 22(1.1%) Others N=1978(98.9%) . The average age was 56 years, with extremes of 2 and 78 years. Gender: Female 11 (50.00%), Male 11 (50.00%), Sex ratio M/F=1.

Conclusion: The outcome was favourable in the majority of cases. Early diagnosis and management can improve the prognosis for patients suffering from rectal prolapse.

Keywords: Prolapse Rectal; Diagnosis; Treatment facteurs de risques; Epidemiologie

1. Introduction

Rectal prolapse (RP) is a disorder of the rectum's stability, resulting in its protrusion through the anus. It is the protrusion of the rectum through the anus [1]. The progression may remain limited to the rectal ampulla (internal RP), extend into the anal canal, or protrude externally (external RP) [2]. There are two types of rectal prolapse. Mucosal prolapse is the permanent or exertion-induced protrusion through the anus of only the mucosal layer of the anal canal [3], and total or complete prolapse is the protrusion through the anus of all the layers of the anal canal (mucosal, muscular and serosal) [3]. Rectal prolapse is becoming increasingly common, with an incidence in the global population of around 1/1000, although this varies from region to region [4]. In Finland, Kairalouoma et al. reported an annual

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incidence of 2.5 cases per 100,000 inhabitants in 2005 [4]. In Mali, Bogola et al. found in 2005 that RP accounted for 7.6% of anorectal pathologies. It is a condition of extreme ages, mainly affecting children aged 1 to 3 years and the elderly [1]. Contributing factors include malnutrition, diarrhoeal diseases, chronic constipation, defecation disorders and dyschezia with prolonged episodes associated with constipation in children [6,7].

The diagnosis is essentially clinical. It generally manifests as a sensation of tissue protruding from the anus, which can be pushed back in with varying degrees of ease during bowel movements, aggravated by hard stools, with persistent constipation in most cases [1,6]. Strangulation of the rectal prolapse and necrosis of the incarcerated segment are the main complications that can occur in 2 to 4% of cases [8,9].

There are various treatment options (medical treatment and surgery) with generally satisfactory results [9,10]. Surgical methods include perineal cerclage, promontofixation (rectopexy and ventropexy) and the Delorme or Starr techniques [2,11, 12]. Despite all these therapeutic advances, the progression of rectal prolapse can be fraught with complications such as post-operative constipation or even post-operative worsening, dyschezia and sometimes recurrence, with mortality remaining virtually zero [13].

The objectives of this study were to:

- Determine the hospitalisation rate for rectal prolapse.
- Describe the sociodemographic characteristics of patients suffering from rectal prolapse.
- Describe the different clinical presentations of rectal prolapse.
- Explain the treatment modalities and progression of rectal prolapse.

2. Methods

This was a retrospective descriptive study covering a five-year period from 1 January 2016 to 31 December 2020. It included all records of patients admitted and operated on in the department for rectal prolapse during the study period, regardless of age or gender. All patient records in which rectal prolapse was diagnosed and who underwent surgical treatment during the study period were included in the study. All incomplete records were excluded from the study. Recruitment was exhaustive and included all patient records admitted to the department for rectal prolapse during the study period.

The diagnostic parameters studied were clinical and paraclinical. Admission was scheduled and emergency. The progression of PR was expressed in months and years.

Contributing factors: all factors (multiparity, menopause, constipation, chronic cough) that contribute to the onset and/or worsening of the disease.

The prolapse was classified as grade II, grade III, or grade IV. The types of rectal prolapse were total rectal prolapse, mucosal prolapse, and muscular prolapse.

The therapeutic parameters studied were:

- The approaches were abdominal, perineal, and anal.
- Therapeutic modalities were determined according to the clinical forms of rectal prolapse. Medical conditioning was performed according to the type of clinical presentation (simple RP and strangulated RP).
 - Simple RP underwent scheduled surgery; - Strangulated RP was treated on an emergency basis;

The therapeutic parameters for surgery were:

- Type of anaesthesia: general anaesthesia with orotracheal intubation or spinal anaesthesia, depending on the clinical condition of the patients;
 - abdominal repair techniques: rectopexy: consists of attaching the rectal wall to the posterior parietal peritoneum using a suture or synthetic tissue strip.
- Perineal and anal repair techniques: these include perineal resections of the rectum:
- . Altemeier: involves resection of the entire rectal wall and a variable length of the ascending colon with progressive ligation of the mesentery;
- . Delorme: involves stripping the mucosa from the muscle layer and plicating the latter.

Post-operative follow-up: patients who underwent surgery were evaluated clinically. The data studied were the condition of the wound, the abdomen and the regularity of bowel movements. We distinguished between uncomplicated follow-up, defined by the regression of clinical signs, primary parietal healing and regular bowel movements, and complicated follow-up (occurrence of morbid factors).

3. Results

Out of a total of N=2000 cases, we collected 22 cases (1.1%) of rectal prolapse. The average age was 56, with extremes of 2 and 78. There was gender parity: male 11 (50.00%), females 11 (50.00%), sex ratio M/F=1. The socio-professional categories were dominated by housewives 40.91%. The mode of recruitment was scheduled in 21 cases (95.45%) and emergency in 1 case (4.54%). The average time to consultation was 29.5 months, with extremes of 6 months and 53 months.

The frequency of functional signs was distributed as follows: Constipation 59.09% (n=13) Rectal bleeding 31.82% (n=7); Mucous discharge 31.82% (n=7), Difficulty passing stools 22.73% (n=5), Abdominal pain 22.73% (n=5), Diarrhoea 18.18% (n=4).

Medical history was dominated by chronic constipation in 36.36% (n=8) and diarrhoea in 9.09% (n=2). Surgical history included appendectomy in 22.72% (n=5) and acute intestinal obstruction in 9.09% (n=2).

We noted multiparous women in 27.27% (n=6), grand multiparous women in 9.09% (n=2) and pauciparous women in 9.09% (n=2). Menopausal women accounted for 18.18% (n=4).

3.1. Physical examination

The degree of prolapse was distributed as follows:

- Grade II: 05 (27.73%) , Grade III: 12 (54.54%) , Grade IV: 5 (27.73%)
- Digital rectal examination data: Mucous discharge 3 (13.64%); clean anal margin 2 (9.09%); blood on finger cot 5 (22.73%)
- Laboratory test results: Haemoglobin level (8-12 g/l): 7 (31.81%) ; SRV (positive): 2(9.09%); HBsAg (positive): 3 (13.63%)
- Frequency of types of rectal prolapse

3.2. Type of prolapse Number Percentage

- Rectal prolapse 17 (77.27%)
- Mucosal prolapse 05 (22.72%)
- Rectal prolapse on polyp 01 (04.54%)
- Rectal and uterine prolapse 01 (04.54%)
- Total strangulated prolapse 01 (04.54%)

General anaesthesia was used in 15 cases (68.18%); spinal anaesthesia was used in 7 cases (31.82%).

The approaches used were: abdominal 10 (45.45%), perineal 5 (22.72%), anal 7 (31.81%).

The surgical techniques used were: Delorme in 12 cases (54.54%), rectopexy in 5 cases (22.73%) and Altemeier in 5 cases (22.73%). The average hospital stay was 18 ± 6.8 days, ranging from 7 to 34 days. The outcome was favourable in all cases.



Figure 1 Complete rectal prolapse



Figure 2 Aspect après la cure selon la technique de Delorme

4. Discussion

Rectal prolapse corresponds to internal prolapse and external prolapse, which are two stages of the same disease [1, 14]. The small size of our sample and the duration of the study are limitations of this study. RP is common. Our result (1.1%) is lower than that found (3.37% of RP compared to anorectal pathologies) by Sacko O in his study in Mali in 2023 [15]. This could be explained by the rarity of this pathology in our context. The population affected by this pathology was relatively elderly (over 65 years of age in 50% of cases). Ka et al. in Senegal in 2011 [12] found this pathology in a relatively young population with an average age of 47.5 years. It generally affects children and the elderly. Its occurrence in young adults is rare [2]. Strangulation of the prolapsed rectum is also a rare complication [2].

Both sexes were equally represented, with 50% each. Oualid et al. in Morocco in 2009 [11] reported a female predominance of 60%. Oumar et al. in Mali in 2023 noted a male predominance of 62.5% [15].

Prolapse in young people, which is as common in men as in women, may be caused by a defect in the rectum's attachment, resulting in excessive length and mobility. Prolapse in older individuals, mainly women, which may follow abdominal hyperpressure due to childbirth and a history of constipation, exacerbated by altered support (hysterectomy, menopause) [1,16]. The most obvious cause in constipated patients is repeated high abdominal pressure during straining [10].

The majority of our patients were housewives (40.91%), most of whom were multiparous. Multiparity may be a risk factor for the development of rectal prolapse. In older multiparous women, rectal prolapse results from degeneration of the perineum with a Douglas hernia through the pelvic floor diastasis. Factors associated with RP include advanced age, multiparity in women, pelvic floor dysfunction, and perineal injury [15, 17].

The clinical picture was dominated by anal prolapse with episodes of pain and chronic constipation, rectal bleeding and difficulty passing stools, rectal elongation and mucous discharge. The same observation was made by Sacko O in Mali in 2023. Sun C et al. in the United States in 2014 [13] reported a 41% incidence of constipation. Oualid et al. in Morocco in 2009 [11] reported a 45% incidence of rectal bleeding. A history of surgery, constipation and menopause were the most common risk factors. Defecation disorders and dyschezia with prolonged straining associated with constipation are common causes of PR in children [13].

According to the literature, rectal examination allows assessment of the hypotonicity of the anal canal, puborectal sling and external sphincter. The finger inside the rectum may feel a stop in the case of internal prolapse and estimate the degree of descent of the perineum (normal up to 2 to 3 cm, much more in the case of prolapse) [18]. No additional tests are necessary to diagnose rectal prolapse [10]. It is important to perform a rectoscopy, especially if low-level surgery is being considered, in order to ensure that there are no associated lesions (tumours, diverticula) that cannot be treated by this route.

From a therapeutic point of view, several surgical procedures have been described for the treatment of RP via abdominal and perineal approaches [6,8,9]. The aim of this treatment is to restore the normal anatomical position of the digestive tract and improve functional signs [19]. The choice of initial treatment depends on the clinical presentation and the surgeon's experience.

These procedures involve narrowing the anal canal, obliterating the Douglas cul-de-sac, bringing the levators closer together, resecting, plicating, fixing or suspending the rectum. While anatomical healing is relatively easy to achieve, functional healing remains the major problem. The essential principle is to respect the compliance and capacity of a viscera with complex physiology [6,19].

We performed three procedures: one abdominal (rectopexy) and two perineal (Delorme and Altemeier). Rectopexy involves fixing or suspending the rectum to the promontory or sacrum and has a low recurrence rate (0-6%) [1].

In emergency situations, only perineal rectosigmoid resection or the Altemeier procedure can be offered, with or without colostomy [2]. As in our study, the only case of strangulation in a 60-year-old patient was treated using the Altemeier technique with a good postoperative outcome [2]. The Delorme procedure is difficult in this situation due to oedema and is contraindicated in cases of necrosis [6]. Abdominal rectopexy is almost always performed with a prosthesis. It ensures an anatomical cure rate of over 90% regardless of the technique used [1,15]. However, it is associated with a higher risk of induced or exacerbated constipation [1, 9,19]. All the requirements for rectopexy must be met: no tension on the fixation, no prosthesis encircling the anterior surface of the rectum, preservation of the lateral surfaces of the rectum [1,19]. Abdominal rectopexy with prosthesis and laparoscopic rectopexy provide an anatomical cure rate of over 90% [20]. In our practice, rectopexy was performed by laparotomy without prosthesis (not available in our hospital). Laparoscopy is also not available in our hospital.

Perianal surgical procedures (Delorme and Altemeier), which can be performed under local anaesthesia, are more appropriate for high-risk elderly patients, but their anatomical effectiveness is lower than that of abdominal surgery and they are free of serious adverse effects [19]. Delorme's mucosectomy (as in our study) may be more physiological than Altemeier's rectosigmoidectomy, which is indicated as first-line treatment as long as functional improvement is expected.

Perineal procedures, which can be performed under local anaesthesia and are more suitable for high-risk elderly patients, are less anatomically effective than abdominal surgery but have no serious adverse effects. After Altemeier's procedure, the anatomical recovery rate varies from 42% to 100% over a 12-month follow-up period; it is 100% over a 12- to 18-month follow-up period [1,17,19].

Postoperative outcomes were favourable in the majority of cases. We noted a good recovery of bowel function with the use of laxatives in half of the cases. The prevention of postoperative constipation depends on its cause [15,17]. The recurrence rate was 16% after perineal resection and 5% after rectopexy [19, 21]. In France, upper tract surgery (rectopexy with prosthesis) is performed as a first-line treatment due to the low recurrence rate (<5%). Furthermore, there has been renewed interest in this procedure with the development of laparoscopy [20]. The recurrence rate after Delorme surgery was 5% to 30% and after perineal rectal resection 0% to 60% [21]. The combination of levator myorrhaphy offers better results in the Delorme and Altemeier techniques [21]. The recurrence rate was zero in our study after one (1) year of follow-up in half of the patients reviewed at the check-up. This may be due to the small sample size in our study.

5. Conclusion

Rectal prolapse affected a young adult population comprising equal numbers of men and women. The clinical forms were dominated by uncomplicated rectal prolapse. Treatment was surgical in all cases, with a predominance of rectopexy and Delorme's mucosectomy. The outcome was favourable in the majority of cases. Early diagnosis and management can improve the prognosis for patients suffering from rectal prolapse.

Compliance with ethical standards OK

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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