



New Trends In Management of Rectal Prolapse

Essay

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In General Surgery*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْحَكِيمُ)

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List of Abbreviations

C.U.S.A	: Cavitron Ultrasonic Surgical Aspirator.
E.A.S	: External anal sphincter.
E.M.G	: Electromyography.
F.A.C.L	: Function Anal Canal Length.
I.A.S	: Internal anal sphincter.
P.N.T.M.L	: Pudendal Nerve Terminal Motor Latencies
R.I.M.P	: Rectal Internal Mucosal Prolapse.
S.T.C	: Slow Transit Constipation.

INTRODUCTION

Rectal prolapse is a protrusion of the rectum through the anal canal. Precisely how a complete rectal prolapse develops is not thoroughly understood Possible etiologies include a defect of the pelvic floor, redundant rectosigmoid colon, deep Douglas pouch, gender (female), psychiatric problems and nulliparity (*Rose et al., 2005*).

The search for a single common theory for the cause of rectal prolapse has not been fruitful. Although there are common factors that seem to apply in many cases, no single theory has explained the reason that a newborn infant, a paraplegic middle - aged man, and a 70 –year-old woman all manifest the same physical findings of rectal prolapse (*Karulf et al., 2001*).

Chronic psychiatric disease requiring long-term medication is observed in 50% of patients with total rectal prolapse under the age of 50 years. Moreover, the medically induced constipation in these patients could represent a cause of poorer functional outcome (*Marceau, 2006*).

Prolapse of the rectum is associated with an inordinate impairment of the patient's quality of life. This lead to a strong desire on the part of the patient for a treatment that will enable

him or her to resume normal social activities, and explains the considerable demands made on the surgeon treating this condition (*Rose et al., 2005*).

Rectal prolapse is a lifestyle-altering disability which has been treated with over 100 surgical option **Senagore AJ (2006)**.

Many techniques have been described for repair of complete rectal prolapse in adults. The results of abdominal approaches are superior to those of perineal approaches, but they carry the risks of major abdominal surgery (*Lasheen et al., 2005*).

A great number of surgical procedures have been recommended for prolapsed rectum. The results of the various operations have not been very successful. A further cause of this disappointment is the poor functional state that often persists, sometimes in aggravated form after the prolapse itself has been successfully cured by operation. This is because many of the questions in the pathophysiology of this condition are unanswered. So, it is difficult to select the best method from many described technique for a given case. The ideal procedure should restore normal anatomy, should have a low risk of perioperative death or morbidity and an acceptable rate of recurrences. It should also correct the functional disturbances such as incontinence and constipation. (*Rose et al., 2005*).

The specific goals of surgical management of full thickness rectal prolapse are to minimize the operative risk in typically elderly populations, eradicate the external prolapse of the rectum, improve bowel function, and reduce the risk of recurrence. The theoretical advantage of a laparoscopic approach are to couple reduction in surgical morbidity and good post-operative outcome. Studies which compare the same laparoscopic and open surgical approach for rectal prolapse have demonstrated that laparoscopy confers benefits related to postoperative pain, length of hospital stay, and return of bowel function. Virtually every type of open transabdominal surgical approach to rectal prolapse has been laparoscopically accomplished. Current laparoscopic surgical techniques include suture rectopexy, stapled rectopexy, posterior mesh rectopexy, with artificial material, and resection of sigmoid colon with colorectal anastomosis, with or without rectopexy. The growing body of literature supports the concept that laparoscopic surgical techniques can safely provide the benefits of low recurrence rates and improved functional outcome for patients with full thickness rectal prolapse. (Marceau *et al.*, 2006).

AIM OF THE WORK

The aim of the present study is to highlight the new theories in pathphysiology, etiology of rectal prolapse, different modalities and new update in management of rectal prolapse.

ANATOMY OF THE RECTUM AND ANAL CANAL

The rectum :-

Is the terminal part of the large intestine and the digestive tract in general. It is in the cavity of the true pelvis and lies on its posterior wall which is formed by the sacrum, coccyx and the posterior part of the muscles of the pelvic floor. It begins from the end of the pelvic colon at the level of the third sacral vertebra and terminates by the anus in the region of the perineum. Its length varies from 14 to 18 cm. Its caliber varies along its length from 4 cm to 7.5 cm in the middle part and again reduces to the size of a slit at the level of the anus (*Sinelnikov, 2008*).

The rectum is composed of two parts pelvic and perineal. The pelvic part is above the level of the floor “diaphragm” of the pelvis, in the cavity of true pelvis, and is in turn subdivided into a narrower supra-ampullary part and a wide ampulla of the rectum. The second part is under the pelvic diaphragm in the perineal region and is known as the anal canal. The pelvic part of the rectum forms a curve in the sagittal plane with the convexity directed posteriorly, corresponding to the curve of the sacral flexure. The upper part of the curve passes from front to back and downwards. The lower part passes from back to front downwards; there are also inconstant curves in the frontal plane. The upper

The relation of the rectum to the peritoneum of the true pelvis varies at different levels .The pelvic part is covered by the peritoneum to a certain extend .The perineal part is devoid of the peritoneal covering .The upper most part ”supra-ampullary”, beginning at the level of the third sacral vertebra, is completely enclosed in a serous coat and has a short, narrow, and thick mesentery (*Sinelnikov,2008*).

Whether this part of the mesentery should be related to the rectum is an arguable question .Many anatomists relate the whole mesenteric part of the pelvic colon . Already at the level of the inferior border of the third sacral vertebra the rectum begins losing its serous covering, at first on the posterior surface, then on the lateral surfaces, and, finally, on the anterior surface .Thus, the upper, supra-ampullary portion of the pelvic part is intraperitoneal, the upper portion of the ampulla is a mesoperitoneal , and the lowest part of the ampulla is retroperiotoneal because only a small area of its anterior wall is covered by the peritoneum (*Sinelnikov, 2008*).

The line along which the peritoneum leaves the wall of the intestine descends obliquely from back to front with the gradual loss of the peritoneal covering by the wall of the pelvic part of the rectum it is replaced by the visceral layer of the pelvic fascia forming the sheath of the rectum ***Fig-2 (Grant’s atlas of anatomy; 2008).***