

## Complete Rectal Prolapse

Ibtesam K.S. Al-Shadydy\*

### **Summary:**

#### **Background and Objective:**

There are many treatment modalities in managing complete rectal prolapse (CRP) current study present simple technique of cauterization plication operation in the treatment of complete rectal prolapse.

#### **Methods:**

The study include 30 patients present with CRP their mean age ( $74.3 \pm 4.6$ ), 19 females and 11 males. With the patient under- general anesthesia in lithotomy position the prolapsed rectum pulled outside the anal canal, the mucosa was cauterized, the muscle layer was plicated by 2/0 dixon suture. Posterior levatorplasty were done in 10 adult patients when it is indicated.

#### **Results:**

The postoperative follow up was 12-24 months. Six had postoperative mucosal prolapse and two had recurrence 5 months after operation. Fecal impaction, stricture and fistula formation were not encountered.

#### **Conclusion:**

The cauterization - plication operation is a simple and easy operation fix the treatment of CKP. It gave satisfactory results with minimal complications.

#### **Keywords:**

Rectal Prolapse, Incontinence plication posterior levatorplasty

*Fac Med Baghdad*  
**2007; Vol.49, No.4**  
Received July 2006  
Accepted Jun.2007

---

### **Introduction:**

Rectal prolapse is a distressing, condition that is associated with fecal incontinence in 50-70% of patient (1). Bleeding and mucus discharge is common symptoms of rectal prolapse. Women are particularly affected, when males develop prolapse there is usually some underlying predisposing factor. Frequently, younger patients give a history of straining at stool of long period (2).

There are many treatment modalities in managing complete rectal prolapse (CRP). The operative management is either perineal or transabdominal. The perineal or sacral operations include Theirsch's, modified Theirsch's, Delorme's, modified Delorme's, perineal rectopexy, posterior repair and suspension of rectum, Shafik's Levatorplasty, perineal rectsegmentectomy, perineal sleeve

resection and Altemeier's procedure (11). A variety of abdominal procedures have been described for the treatment of CRP such as abdomino perineal levator repair (11), segmoidopexy (12) or cutait operation (13), anterior resection, lateral strip rectopexy (Riptein repair) (14), Posterior sling rectopexy or well's operationo (11) rectal plication and Ivalon stent (15).

However, a postoperative mortality after abdominal procedures, as high as 10% was reported, presacral hemorrhage, recurrence, incontinence and constipation are common postoperative complications of the transabdominal procedures (16).

The current operation presents an operation for the treatment of CRP, which is simple, easy and with minimal complications.

---

\* Consultant Surgeon, Assistant Professor,  
Department of Surgery, Al-Kindy Med. Col. Bagh.  
Iraq.

### **Patients & Methods:**

We include 30 patients presented with CRP for a range duration of 3-5 years with a mean (4.1±) years. Their ages ranged from (2-40) years with a mean of (24.3±4.6) years, six were children's (2-12) years (four females and two males), 19 females and 11 males. All patients had a large history of excessive strain on defecation. Fecal incontinence was present in 10 patients. The length of the prolapsed segment varies from (2-5) inches with a mean of 3.1 ± inches.

Laboratory work include blood count, renal and hepatic function tests was normal, proctoscopy, colonoscopy were normal. Preoperative EMG study revealed diminished activity of external anal sphincter in all patients.

Preoperative bowel preparation was done by mechanical cleansing and metronidazole (50 mg/kg/day) administration one day before operation. Under general anesthesia, the patient was placed in lithotomy position with slight Trendelenburg, so as to minimize pelvic congestion. The prolapsed rectum was pulled tightly downward with Babcock forceps. The rectal mucosa was cauterized in vertical lines starting from slightly above the pectinate line and up to the upper limit of the prolapsed segment using the cautery probe. The cauterization includes the rectal mucosa and submucosa only, so that after cauterization the muscle coat was exposed. Four cautery lines were performed one at each corner of the prolapsed gut.

After cauterization the exposed muscle coat of the rectum at the cauterized lines was plicated by a series of vertical purse-string

sutures of 2/0 Dixon. The sutures were tied, so that they gathered the prolapsed rectal wall. Multiple vertical purse-string sutures (2-3) were taken between the 4 main plicating sutures in the prolapsed segment. After completing the plication the prolapsed rectum was pushed back inside the anal canal.

Posterior levatorplasty was done in 10 adult patients in whom the length of the rectal prolapsed segment was more than 4 inches and who were incontinent. The levator hiatus in these patients was found abnormally wide.

The technique of posterior levatorplasty was done by making a semicircular incision about 1.5 inches posterior to the anal opening, it was deepened in the retro anal space, then the levator ani muscle was exposed on both sides where the opposing posterior part of each sutured together posterior to the anal canal using 2/0 Dixon sutures, so that the levator hiatus was narrowed. One of these sutures took a bite in the wall of the anorectal junction. The wound was closed loosely.

Postoperative care the patients were discharged one day after the operation. Mild laxative was given daily for 7 weeks. A hot sitz-bath were done twice daily. The patients were advised not to strain at stool during defecation. Antibiotics and analgesics were given for 5 days.

The patients were followed up for a mean of 31.6 ± 14.8 months (12-48 months) every 3 months in the first year and every 6 months thereafter. They are questioned about straining at stool, fecal incontinence and occurrence of rectal prolapse.

Six patients out of 30 patients of the study got mucosal rectal prolapse after the operation, by 2 months in 2 patients and, after 3 months in 4 patients. These six patients were treated by mucosal plication. Fecal impaction, stricture and fistulas were not encountered. One patient had got CRP after operation by 5 months because the patient used to defecate in squatting position.

### **Results:**

No complications were encountered either pre- or post-operatively. All patients returned to their normal daily activities within 8-16 days after operation.

The 10 incontinent patients became continent after operation. The tendency to strain at defecation gradually disappeared in the first 2-4 post operative weeks resulting in normal defecation.

### **Discussion:**

The treatment of CRP is problematic, this seems to be related to the etiology which is still controversial and most of these techniques

deal with the secondary effect and not with the primary cause. The abdominal suspension operations, which are in common use

nowadays, provide mechanical suspension of the prolapse, with a possibility of post operative constipation, which may not cure the fecal incontinence associated with CRP. Also resection operations whether abdominal or perineal do not deal with the primary etiology, beside being associated with morbidity.

Delorme described a simple operation for CRP in which intussuscepting the prolapsed segment in a serpentine fashion after mucosal dissection which is associated with excessive bleeding. Our technique avoiding the bleeding mucosal dissection of Delorme procedure, in which linear cauterization of the prolapsed segment creates a raw areas when plicated heal by fibrosis, thus the prolapsed segment is fixed by these multiple fibrotic fixation areas which appear to keep the prolapsed segment plicated. Meanwhile, the plicating sutures is taken through the cauterization lines would help in fixing the prolapsed segment until fibrosis occurs.

Our technique is added by levatorplasty in 10 cases in which the levator hiatus is wide

due to the sagging of levator ani muscles. In such cases, we sutured the edges of the two levators posterior to the rectum. By this procedure we diminishes the laxity of the intrahiatal structures as well as it elevates the two levator ani muscles causing increase in their functional capacity.

Mucosal prolapse occurred in 6 cases, it could be due to pre-existing redundancy of the rectal mucosa above the prolapsed segment, these are treated by plication sutures fixing the prolapsed mucosa to rectal muscle.

Previous studies (3,4,8) suggest that sagging of levator ani as being the etiological factor in the genesis of CRP. Levatorplasty may be used as a satisfactory treatment of small sized segment of CRP (8).

In conclusion the cauterization - plication operation is a simple and easy operation for the treatment of CRP, it gave satisfactory results with minimal complication.

#### **References:**

1. Keighley MRB, Williams NS (1993). *Surgery of the anus, rectum and colon*, vol. 2 Ch. 24 P675-719. W.B. Saunders Company Ltd.
2. Chris T, Thiersch's Operation for RP in infants and children. *Am J. Surg* 1960. 100; 45-61.
3. Schootz DJ, Veidenheimer MC (1985). *Rectal prolapse, pathogenesis and clinical features in coloproctology and pelvic floor*, P. 303-309.
4. Jacobs LK, Lin YJ, Dirkin B. *The best operation of rectal prolapse*, *Surgical clinics of North America* 2000, 81: 49-70.
5. Wyatt AP. *Perineal rectopexy for rectal prolapse*. *Br J Surg*, 1981; 68: 717.
6. Aschraft KW, Amoury RA, Hoder TM. *Levator repair and posterior suspension for rectal prolapse* *J Ped Surg* 1977; 12: 241-245.
7. Lechaux JP, Chaux D, Perez M. *Results of Delorme's procedure for rectal prolapse. Advantages of modified technique*. *Dis Col Rect* 1995; 38: 301-7.
8. Shafik A. *A new concept of the anatomy of the anal sphincter mechanism and the physiology of defecation. Complete rectal prolapse a technique for repair*. *Colo Proctology* 1987, 6: 345.
9. Mickuchcz JZ. *Opoerative be handlings des propalsus rectiet voli vaginati* *Arc b Klim cbir* 1889, 38: 74-97 *quested from Rob and Smith* 1993. *Surg of colon, rectum and anus* 5<sup>th</sup> edition, Vol. 2 P730-735.
10. Altemeier WA. *Rectal prolapse*, 5<sup>th</sup> edition P. 1252-1259, Lippincott Company, Philadelphia, Toronto.
11. Wetts JD, Rothenberger DA, Goldberg SM. *Treatment of rectal prolapse in coloproctology and Pelvic floor* 1985; 308-325.
12. Pemberton J, Stalker. *Surgical treatment of complete rectal prolapse* *Ann Sug* 1939, 109: 799.
13. Goligher JC. *Surgery of anus, rectum and colon*, 4<sup>th</sup> edition 1980: 224-258, New York MacMillian.
14. Loygue J, Nordinger B, *Rectopexy to promontory for treatment of rectal prolapse*. *Dis Colon Rectum* 1984; 2: 356-359.
15. Weddel J, Mere Zu, Bissen P. *A new concept for management of rectal prolapse*. *Am J Surg* 1980; 139: 723.
16. Madoff RD, William JG. *Rectal prolapse, intra-abdominal repair in Rob. And Smith operative surgery of colon, rectum and anus*. 5<sup>th</sup> edition 1993, vol. 2 Oxford London Boston Butter Worth Heinmann (P. 701: 705).