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Delorme's Procedure for Complete Rectal Prolapse: Case Report and Literature Review

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SUMMARY

Further to a report by Monson et al (1986) on the Delorme's operation for the treatment of complete rectal prolapse, interest has been revived in this century - old procedure. Recently, we have managed a 56-year-old female, referred with a recurrent large complete rectal prolapse, after three failed attempts at Theirsch procedure. Case-report, and a review of the literature is presented.

INTRODUCTION

Delorme's operation is one of the oldest operations described for the treatment of complete rectal prolapse. Since it was first described by Rene Delorme in 1900 various modifications to the surgical technique have been introduced to improve the anatomical and functional results. During recent years interest in this procedure has been revived by T. G. Brennan (U.K) who has modified this procedure, and recommends it as a safe option and probably the treatment of choice in patients suffering from rectal prolapse[1].

The advantages of the modified Delorme's operation for rectal prolapse in our view are:

1. It does not preclude any form of sphincter repair should this be necessary either at the same operation or at a later date.
2. The plicated rectum does not interfere with either a postanal or an anterior anal repair.
3. If the operation fails, it is possible to perform a second procedure.
4. In fit patients, it is also possible to carry out a trans-abdominal repair.

CASE REPORT

A married 56-years-old female was referred to our department of surgery with a 10 year history of the prolapse of rectum. She complained of incontinence for stools and bleeding per rectum off and on. Her complaints persisted even after 3 attempts at theirsch repair at Gujranwala. On examination she was a well built, fair-skinned lady with slight pallor. On straining she developed a complete rectal prolapse which had to be reduced manually by the patient. System review was unremarkable. After preoperative work-up a delorme's procedure as modified by Monson et al (1986)[1], was carried out. One pint of blood was transfused peri and post operatively. Patient had slight bleeding from raw mucosal area, when the rectal pack was removed, which stopped by itself. Patient made smooth post operative recovery and was discharged on day 7. Patient is symptom-free at 2nd follow up on three month.

Technique

The operation was carried out under general anaesthesia with the patient in lithotomy position. The prolapse was pulled down to its full extent i.e. 10 cm. Adrenaline in saline (1:400,000) was injected submucosally from the dentate line to the apex of the prolapse. This reduces hemorrhage and facilitates the subsequent dissection. The volume required was 100 ml and a waiting for few minutes in order to allow the adrenaline to take maximum effect, was required.

The first stage of the operation was to denude the mucosa from the prolapsed rectum. A circumferential incision was made in the mucosa 1

cm proximal to the dentate line. The mucosa was dissected from the underlying rectal muscle using sharp dissection. The authors' preference is to use a pair of scissors. The discretion continued in a circumferential manner until the apex of the prolapse was reached. The mucosal dissection was continued upwards inside the prolapse upto 3 cm. The mucosal tube was then excised leaving a short cuff of rectal mucosa, held with four hemostats, placed accurately at 3,6,9 and 12 0' clock.

A series of rectal plicating sutures (vicryl No 1) were inserted, starting at the mucosa at the dentate line and picking up good bites of the rectal muscle at 1-2 cm intervals. Initially four sutures were placed at 3,6, 9 and 12 O' clock. Further eight stitches were placed between these sutures at regular intervals (Fig. 1).

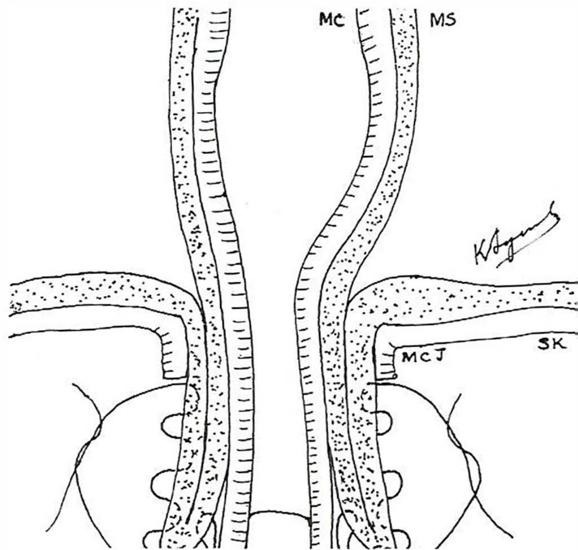

Fig. 1: **MC Mucosa**
MCJ Muco-cutaneous Junction
MS Muscle
SK Skin
Longitudinal section illustrating extent of muscosal dissection (beyond the apex) and the position of plicating sutures.

The prolapse was reduced manually by the assistant, and sutures were tied. Mucosa to mucosa opposition was carried out with eight 2/0 catgut stitches.(Fig. 2.) A rectal tube with roll gauze was left for 24 hours.

LITERATURE REVIEW

Rectal prolapse is a common clinical problem. It is important to delineate complete from partial or mucosal prolapse, since the management of the two conditions differs substantially. The clinical distinctions between the two can be made on the basis of four clinical markers[2] (Table I).

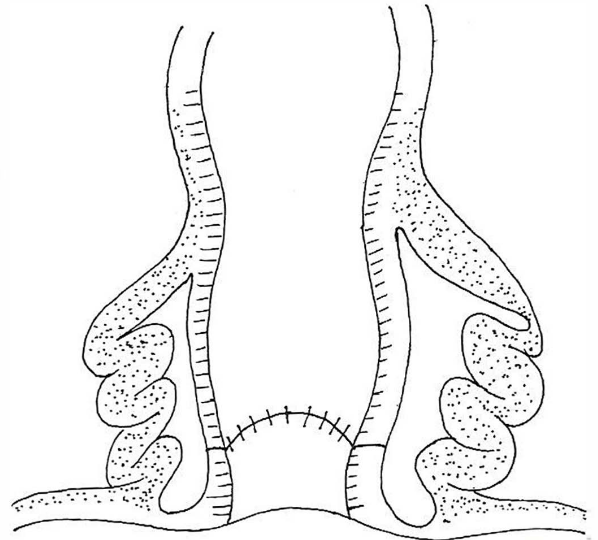

Fig. 2: **The plicated muscle of the rectum within the pelvis.**

Table 1: Clinical markers of distinction between rectal mucosal prolapse and complete rectal prolapse.

Complete Prolapse	*Mucosal Prolpase*
Concentric furrows	Radial grooves
Protrusion up to 10 cm	Protrusion < 5 cm
Anus in normal position	Anus everted
Thickness of double rectal wall	Thickness of double mucosa

More than 50 operations have been described for complete rectal prolapse, though many are variation on similar "Themes" (Table 2).

Since the re-emergence of delorme's operation in the early 1970s its place in the treatment of rectal prolapse has been confined to elderly patients and those unsuitable for major abdominal procedures. However, with the success rates comparable to abdominal procedures proponents of delorme's operation argue for its use as first choice in the treatment of full thickness prolapse[1,3].

Table 2: Various operations for rectal prolapse.

Abdominal operations
- Roscoe Graham
- Ripstein
- Wells
- Anterior resection
- Mayo
- Anterior resection with sacral fixation.

Perineal operations
- Thiersch repair
- Silicone rod implant
- Delorme's procedure
- Rectosigmoidectomy.

The delorme's procedure is usually performed under general or regional anaesthesia, but can be performed under local anaesthesia[4]. Unlike the perineal rectosigmoidectomy, it is applicable to the hidden or occult procidentia which has not yet reached the stage of development where it can be prolapsed through the anus[4]. Review of the literature reveals that recurrence rates range from 0 to 24 percent following the delorme's procedure[1,3-5] (Table 3).

Table 3: Recurrence after Delorme's procedure.

Reference	*No. of patients Recurrence/ operated*	*Recurrence %*
Aminev & Malyshev (1961)	67/281	24
Christensen & Kirkegaard (1981)	1/12	17
Moskalenko (1973)	0/21	0
Nay and Blair (1972)	3/30	10
Uhlig and sullivan (1979)	3/44	7
Abulafi et al (1990)	1/22	4.5
Stewart and Brennan (1991)	5/58	8.6
TOTAL	80/468	AVERAGE 10

Incontinence, not infrequently associated with procidentia and also present in the discussed case, however, is more likely to improve following transabdominal repairs than after perineal repairs[3,4]. Christensen and Kirkegaard (1981) reported improvement of this symptom in 33 percent of their series of 12 patients[3].

CONCLUSION

The above mentioned patient has shown post operative smooth recovery. Incontinence that was a major cause of anxiety and distress, has improved post operatively. Yet long term results await follow up. We conclude that delorme's operation is a safe and effective alternative for complete rectal prolapse.

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