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CASE REPORTS

Complete rectal prolapse in adults: a Tanzanian experience

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SUMMARY

This is a retrospective report of nine patients with complete rectal prolapse managed by the authors at the Muhimbili Medical Centre, Dar es Salaam between 1990 and 1993. The average age of patients was 36 years and eight of the patients were males. Six of the patients presented as emergency admissions of whom three had irreducibility and required perineal proctosigmoidectomy. This was the procedure of choice for irreducible complete rectal prolapse.

INTRODUCTION

Rectal prolapse in adults is not a common problem and is reported as predominantly a disease of the elderly female.[1] It is a disabling surgical condition with considerable controversy regarding its management and one that has fascinated surgeons for a long time.[2] Actual rectal prolapse occurring in a healthy young man, eventually leading to gangrene and requiring emergency surgery must be considered rather rare. It should therefore not be surprising that many a surgeon would be unfamiliar with its management.

In 1990, a previously healthy young man presented with a sudden massive prolapse that was irreducible. Over the next four days he was managed conservatively until he developed gangrene. An urgent perineal proctosigmoidectomy was then performed. This initial case prompted the authors to study the pattern of rectal prolapse seen at Muhimbili Medical Centre and report the salient features.

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MATERIALS AND METHODS

All adult patients admitted to hospital with complete rectal prolapse between 1990 and 1993 were seen by the authors and managed accordingly. Those in whom manual reduction was achieved were managed by a Thiersch procedure with a view to performing a definitive procedure at a later date. Those in whom manual reduction was either unsuccessful or not possible due to local factors were managed by perineal proctosigmoidectomy. Local factors which contra-indicated manual reduction included evidence of local necrosis and massive oedema. Three cases were admitted with uncomplicated prolapse and were managed electively.

Perineal Proctosigmoidectomy

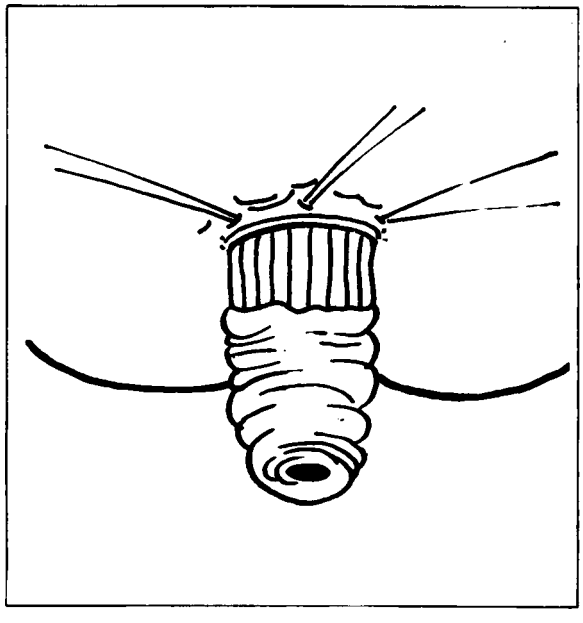
The procedure is performed under general anaesthesia with the patient in lithotomy position; and an indwelling urethral catheter *in situ* Four stay sutures are placed one anteriorly, one posteriorly and one on the other side, laterally. A semi-circular incision is made two cm from the anal verge beyond the stay sutures and this is gradually deepened with careful haemostasis being observed as the rectal wall is usually oedematous and vascular. The incision is deepened until it goes through the bowel wall and the sigmoid colon is exposed. The incision is then complete circumferentially. The mesentery of the sigmoid colon is clamped and transfixed by sutures. The sigmoid colon is then pulled downwards until it can come down no more, and it is divided two cm outside the anus, again after stay sutures corresponding to those on the other outer rectal cuff are applied.

Anastomosis is then performed by interrupted silk 2/0 sutures as a single layer between the outer and inner cuff using the stay sutures to approximate the edges. The rectal cuff is then gently pushed back through the anal canal, and a sofra-tulle dressing on a gauze pad is left in place.

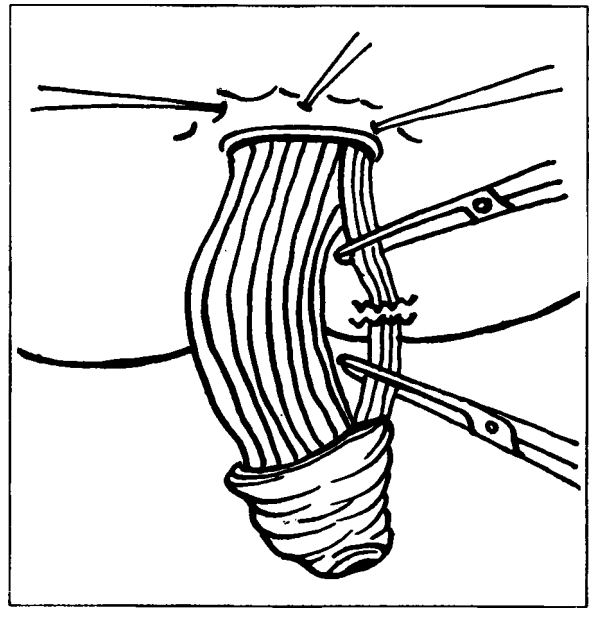
RESULTS

There were a total of nine patients with rectal prolapse seen over a three year period. Three had reducible rectal prolapse while six were seen with irreducible prolapse requiring emergency surgery. There were eight males and only one female. Their aged ranged from 21 years to 70 years but the majority of patients were young being between 21 and 40 years of age. The only female was the oldest patient at 70 years.

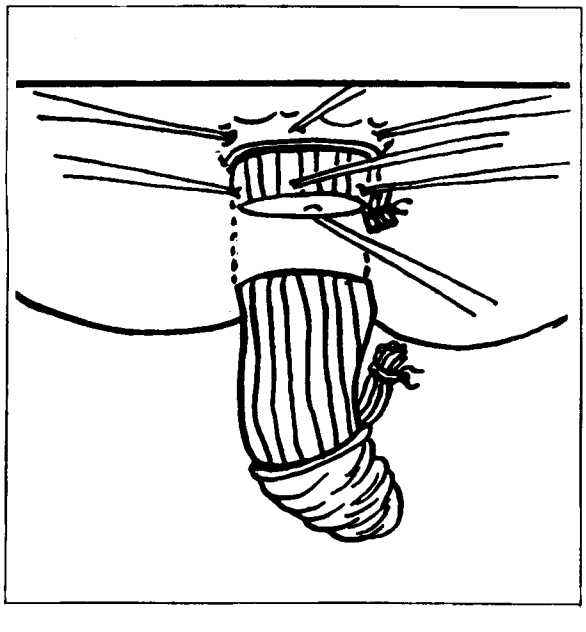
Figure I; Steps in perineal proctosigmoidectomy.



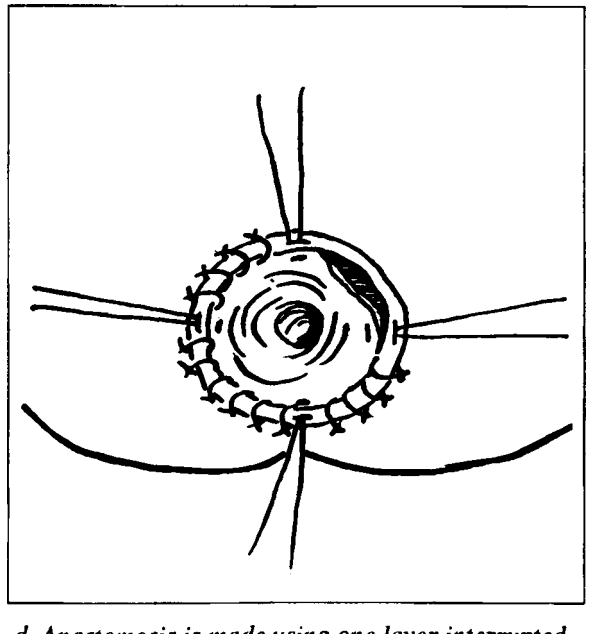
a. Circular incision is made 2 cm proximal to anal verge.



b. The prolapsed sigmoid colon is pulled to the maximum and mesentery is clamped and divided.



c. The redundant sigmoid colon is excised.



d. Anastomosis is made using one layer interrupted silk.

Table I: Age and sex distribution of patients.

Age Group	Males	Females	Total
21–30	2	0	2
31–40	4	0	4
41–50	1	0	1
51–60	1	0	1
Over 60	0	1	1
Total	8	1	9

Table II: Treatment modalities.

Method of Treatment	Emergency	Elective	Total
Manual reduction only	1	0	1
Thiersch procedure after manual reduction	2	0	2
Perineal proctosigmoidectomy	3	1	4
Anterior sigmoid resection + proctopexy	0	1	1
Sacral fixation with Marlex Mesh	0	1	1
Total	6	3	9

Of the emergency cases, one patient had manual reduction only, two patients had a Thiersch procedure after manual reduction and three patients had perineal proctosigmoidectomy. Of the elective cases one had perineal proctosigmoidectomy, one had anterior sigmoid resection with proctopexy and the last one had sacral fixation with Marlex mesh. One of the patients who had emergency perineal proctosigmoidectomy developed peritonitis post operatively probably from an anastomotic leak. He had a laparotomy and a defunctioning right transverse colostomy done. He recovered well and the colostomy was closed three months later.

Another patient who had massive rectal prolapse with evidence of local necrosis had emergency perineal proctosigmoidectomy with a protective defunctioning transverse loop colostomy at the same sitting. He fared well and his colostomy was closed later on. One patient died of hypertension and stroke.

The operation of perineal of proctosigmoidectomy was performed in four of the nine cases, and is described here with illustrations. We feel that all surgeons in a developing country should be familiar with the procedure which may be life saving in an emergency.

DISCUSSION

Rectal prolapse has been defined as protrusion of the mucosa and muscle layers of the rectum through and beyond the anus.[3] It is an uncommon but disabling problem with controversy regarding its management.[2,4] When it occurs in the West it is a disease of the elderly common in the sixth decade. The majority of patients are females.[2,5]

There is little information regarding the incidence of rectal prolapse in Africa although Hiza[6] in an analysis of surgical admissions at Muhimbili Medical Centre in 1974 reported seven cases. Since the disease is not common and occurs in the elderly few surgeons have an interest or the opportunity to develop expertise in its management. In this series nine patients have been collected within a period of three years, six of whom were admitted as emergencies with irreducible prolapse.

Figure II: Photograph of the index case showing massive oedematous prolapsed rectum with local necrosis.

Three facts are noteworthy in this albeit small series: The first is that while in the West rectal prolapse is a disease of the elderly, with the exception of one patient the other eight were young and healthy, and their average age was 36 years. In Watts' series of 179 patients[2] the average age was 52 years, while Mann and Hoffman[1] in London reported an average age of 65 years. Henry[3] has however reported that while the disease affects women over 40 years of age, the peak incidence among males is 20 to 40 years.

The other fact is that there was only one female patient in this series, the rest being males. This is in contrast to Western series where the disease is commoner in females with a female to male ration ranging from 6:1 to 10:1.[1,2,7] The only female in our series was 70 years old.

Thirdly, while most patients present having noted a mass protruding per anus with associated constipation or faecal incontinence after a period of time,[2,3] in this series six patients presented with irreducible prolapse as emergencies. The only female patient presented with a reducible prolapse associated with uterovaginal prolapse.

The management of rectal prolapse is still controversial and several different procedures have been described on the basis of the pathogenesis of rectal prolapse and the surgeon's personal preference. Methods currently used include:

i. Narrowing of the anal orifice by Thiersch repair.
ii. Resection of the bowel and suspension or fixation of the rectum to the sacrum or other structures. Suspension or fixation of the rectum may be done either with sutures alone or with the use of Teflon or Marlex Mesh (Ripstein procedure).
ii. Perineal procedures including the Delorme's Procedure and Perineal proctosigmoidectomy. The perineal procedures are useful in frail and elderly patients who would not tolerate extensive abdominal procedures.[2,3,7]

In this series we found perineal proctosigmoidectomy a useful procedure in those patients who presented as emergencies with irreducible, oedematous prolapse, particularly if necrosis had started to occur when an abdominal procedure would be contra-indicated. The management of such cases may confuse some, as was evident by the index case in this series who remained in hospital for four days with his doctors helpless as to what to do. It is a simple and useful procedure to be familiar with as it can be done in a district hospital.

We conclude that rectal prolapse is uncommon in our community, most of our patients are young, healthy males presenting as emergencies in whom perineal proctosigmoidectomy seems to be the procedure of choice. In elective cases the other conventional procedures can be done depending on the surgeon's preference and experience.

ACKNOWLEDGEMENTS

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