CLINICAL CASE

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Treatment of Total Rectal Prolapse by Perineal Rectosigmoidecty – Altemeier's Procedure

Leczenie całkowitego wypadania odbytnicy sposobem kroczowej rektosigmoidektomii według Altemeiera

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Abstract

Background. Full thichness rectal prolapse is a disabling condition that is common in an ageing population. Perineal operations are less traumatic than are abdominal procedures for the frail patient.
Objectives. The aim of the study was to review the outcome with respect to control of the prolapse.
Material and Methods. From 1985 to 2000 47 patients with rectal prolapse were treated with Altemeier's procedure. The mean age was 75 years. Half of the patients suffered from medical diseases.
Results. The recurrence rate was 15%. There were 2 postoperative deaths. 2 patients had anastomotic leaks. One patient had to be re-operated on because of bleeding.
Conclusions. Altemeier's procedure is a relatively easy and safe operation with a low recurrence rate **(Adv. Clin. Exp. Med. 2003, 12, 4, 537–541)**.

Key words: rectal prolapse, perineal rectosigmoidectomy, Altemeier's procedure, recurrent rectal prolapse.

Streszczenie

Wprowadzenie. Pełnościenne wypadanie odbytnicy jest stanem występującym głównie w populacji ludzi starszych. Dla pacjenta obciążonego, operacje sposobem kroczowym są mniej traumatyzujące niż z dojścia od strony jamy brzusznej.
Cel pracy. Celem pracy była ocena wyników leczenia wypadania odbytnicy po zastosowanym sposobie operacji.
Materiał i metody. W latach 1985–2000 operowano chorych sposobem Altemeiera z powodu wypadania odbytnicy. Średni wiek chorych wynosił 75 lat. Połowa 47 chorych była obciążona dodatkowymi schorzeniami.
Wyniki. Odsetek nawrotów wynosił 15%. Dwóch chorych zmarło, u dwóch wystąpiły przetoki w zespoleniu. Jeden chory był reoperowany z powodu krwawienia.
Wnioski. Operacja sposobem Altemeiera jest stosunkowo prosta i bezpieczna, a odsetek nawrotów jest niski **(Adv. Clin. Exp. Med. 2003, 12, 4, 537–541)**.

Słowa kluczowe: wypadanie odbytnicy, rektosigmoidektomia kroczowa, operacja Altemeiera, nawracające wypadanie odbytnicy.

Full thickness rectal prolapse is a disabling condition that is common in an ageing population. In approximately 50% of the patients the condition is accompanied by faecal incontinence. A number of abdominal operations have been described [1, 2] most of them effective in controlling the prolapse whereas continence usually only is restored in less than half of the patients [2]. Perineal operations are less traumatic for the frail patient and especially Delormes operation, which was described in 1900 [3] has been widely adopted during the last 20 years [4–8]. In 1970 Altemeier described the perineal resection for rectal prolapse [9], a procedure we have used routinely in elderly and frail patients since 1985. The aim of the present study was to review the outcome of Altemeier's procedure with respect to control of the prolapse.

Material and Methods

From 1985 through 2000 47 patients (46 female, 1 male) with full-thickness rectal prolapse underwent Altemeier's perineal rectosigmoid resection. Our indication for choosing Altemeier's procedure was a total rectal prolapse of 10 centimeters or more in elderly or frail patients. The mean age was 75 years (range 56–92). Thirteen patients (28%) had previously surgery for rectal prolapse (Delormes operation, Altemeier's operation, and Thirsch wire encirclement). Twenty-four patients had one or more complicating medical diseases (Tab. 1). After discharge from the hospital, all patients were seen for routine follow-up after 1–3 months. A prospective follow-up examination was carried out after mean 37.5 months (range 1–169 months). The patients were questioned about recurrence of the prolapse, incontinence and satisfaction with the results in general.

The available data of the patients from either outpatient examinations or from other admissions to Herlev Hospital are included in the series.

Statistical analysis

GraphPad Prism version 3.00 for Windows (GraphPad Software, San Diego, CA) was used for calculation of the 95% confidence interval of the survival curve.

Operative technique

The patients are given an enema and peroperatively antibiotic prophylaxis with gentamycin and metronidazol (240 mg and 1.5 g, respectively). With the patient in general or spinal anaesthesia and in the lithotomy position, the prolapse is reproduced to its full length (Fig. 1). The mucosa is incised circumferentially by cautery 1–2 cm from the dentate line. After incising the mucosa the incision is carried through the muscularis and the outer layer of the bowel is divided and the bowel unfolded. The peritoneal cul du sac is identified anteriorly and opened. The everted stalk is divided and ligated. The procedure being continued around the lateral aspects of the bowel, securing ligation of the midrectal vessels. The mesorectum is divided close to the bowel wall. When no further mobilization is possible, the bowel can be resected – the length usually varies between 10 and 50 cm. The resection starts by placing four full-thicknes stay sutures in the four quadrants between the rectal cuff (1–1.5 cm from the dentate line) and the everted bowel. The proximal colon is divided by cautery and the stay sutures tied. The anastomosis is handsewn with full thickness, interrupted 3–0 Vicryl sutures.

Postoperatively the patient is kept on ordinary diet with the addition of a mild laxative.

Results

41 patients (87%) had en uneventful recovery. 3 patients were re-operated on with a diverting colostomy, one patient because of bleeding and two patients because of anastomotic leaks. Only one patient had closure of the colostomy. This patient developed a coloanal anastomotic stricture requiring dilatation. One patient developed cardiac arrhytmia.

There were two postoperative deaths. A 68-year old man suffering from a psychiatric disorder and from obstructive airway disease, died from respiratory failure. A 82-year old female died from a stroke within 30 days of surgery, though the recovery from the operation itself was uncomplicated.

22 patients were dead at the time of follow-up. The surviving 23 patients were invited to an outpatient examination except the 2 patients with a permanent stoma. One did not respond, 10 responded by letter and 12 were examined in the outpatient clinic. Seven patients had recurrence of the prolapse (15%) (Fig. 2). Patients with co-morbidity did not have a significantly increase of recurrence

Table 1. Associated medical conditions in 24 patients with total rectal prolapse
Tabela 1. Współistniejące schorzenia u 24 chorych z pełnym wypadaniem odbytnicy

Cardiovascular (Sercowo-naczyniowe)	ischaemic heart disease (niedotlenienie mięśnia sercowego) hypertension (nadciśnienie tętnicze)	6 2
Cerebral (Mózgowe)	dementia (demencja) insult (udar mózgowy) psychiatric disorders (schorzenia psychiczne)	4 3 8
Diabetes (Cykrzyca)		2
Obstructive lung disease (Obturacyjna choroba płuc)		3
Miscellaneous (Inne)		6

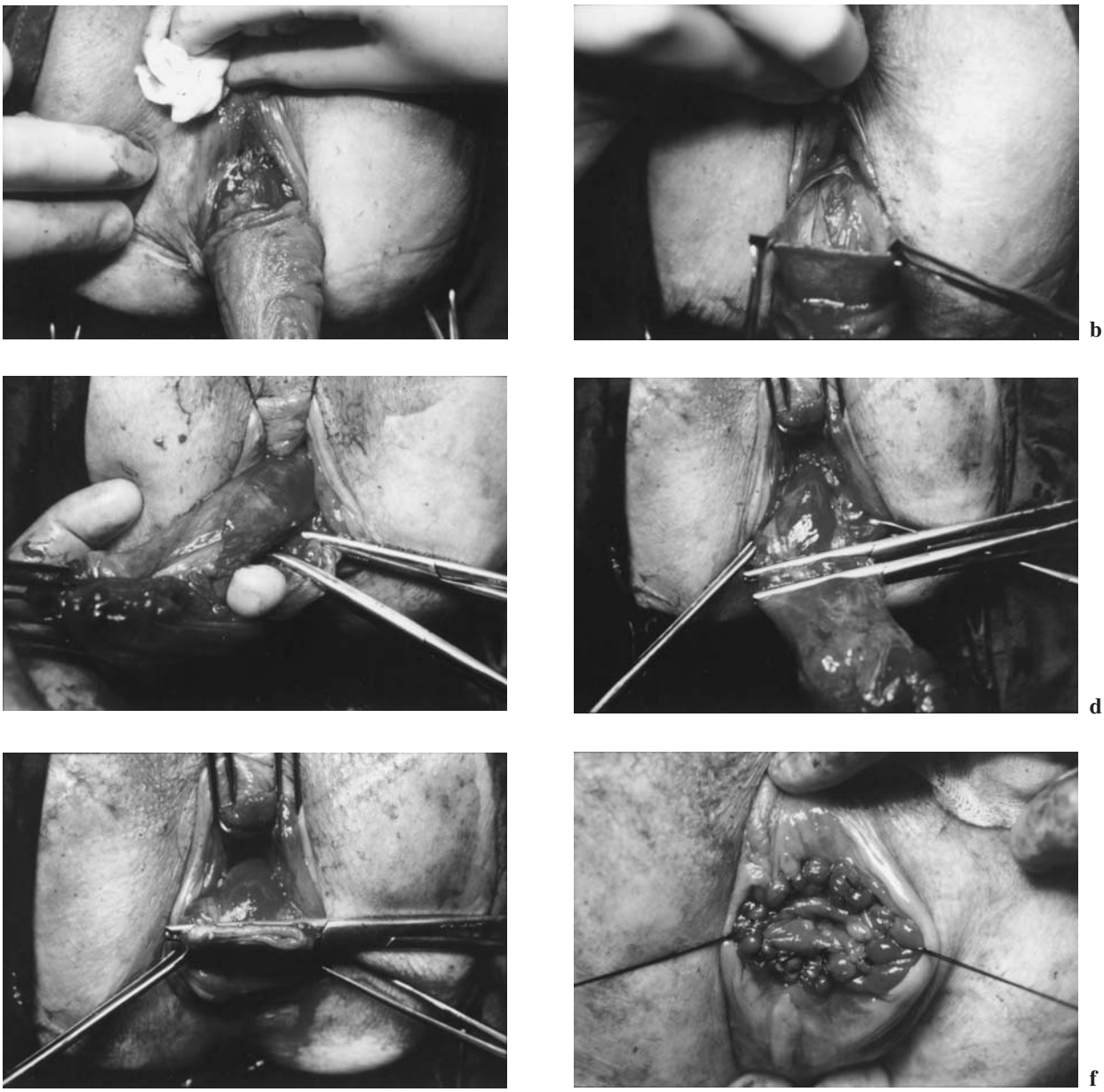

Fig. 1. Operative technique in the Altemeier's procedure for total rectal prolapse. The mucosa is incised 1–2 cm from the dentate line (a). The peritoneal cul de sac is opened (b). The mesorectum is clamped between Kocher's and can be divided (c). The bowel is clamped (d) and resected (e). The anastomosis is sewn with full thickness interrupted sutures (f)

Ryc. 1. Technika operacji sposobem Altemeiera w całkowitym wypadaniu odbytnicy. Błona śluzowa nacięta w odległości 1–2 cm od linii grzebieniastej (a). Ślepy zachyłek otrzewnej otwarty (b). Mezorektum zaciśnięte kleszczykami Kochera i oddzielone (c). Jelito zamknięte (d) i resekowane (e). Zespolenie wykonane przez wszystkie warstwy szwami węzełkowymi (f)

with time after operation. Age also had no significant effect on recurrence rate and there was no difference between dead and living patients with respect to length of follow-up or recurrence. Two patients were re-operated with Altemeier's procedure. One patient had one procedure, and another patient had even two procedures, with no recurrence after five and one month, respectively. One patient had a Delorme's operation. Four patients with recurrences are not re-operated.

22 patients were satisfied with the operation, though five being incontinent. None of the patients were worsened by the operation. Further 8 patients were incontinent. Two patients suffered from obstructed defecation.

The physical examination at follow-up showed no case of anastomotic stenosis or signs of recurrent prolapse. The patients with incontinence had very thin and patulous sphincters with decreased contractability.

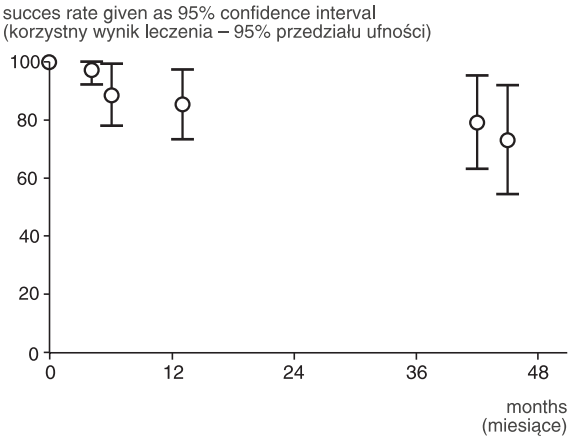

Fig. 2. Success rate of Altemeier's procedure for the treatment of rectal prolapse given as a 95% confidence interval (Kaplan-Meier plot)

Ryc. 2. Odsetek pomyślnych wyników leczenia wypadania odbytnicy metodą Altemeiera. Przedział ufności 95% (wykres Kaplana-Meiera)

Discussion

The rate of recurrence of 15% in our series correspond well to other reports (Kaplan-Meier analysis) [4–5, 10–12].

Several non-randomized studies suggest a higher recurrence rate after perineal than after abdominal approach, but there is a tendency that the patients undergoing abdominal procedures are younger and healthier and the complication rate is as high as 15% [1, 12]. There has until now only been published one randomized study comparing abdominal resection rectopexy and perineal rectosigmoidectomy but the small number of patients (10 patients in each group) does not allow to conclude which method should be the gold standard [13].

The mortality rate of 2% is low considering these old and frail patients [14].

One must be cautious comparing degrees of incontinence from one series to another because of the rather subjective and ill-defined use of the term incontinence. Allthough there is a significant correlation between prolapse and incontinence, the exact etiologic relationship remains obscure [1]. This study does not allow any conclusion with the respect of the Altemeier procedure and anal continence.

We would like to emphasize that the major problem for the patients is dealing with a prolapse, incontinence being a secondary problem. Further, the Altemeier's procedure can be applied to patients with recurrences after earlier prolapse surgery with equally good results as reported by Fengler et al. [15].

Conclusion

Altemeier's procedure is a relatively safe operation and has advantages, especially in elderly and frail patients. It has a low recurrence rate and can improve continence to some extent in most patients. The limitations of retrospective reviews are well known and recently an internatonal multicenter randomized study has been initialized to try to clarify the right procedure for rectal prolapse. The authors' opinion to choose the Altemeier's procedure is for a prolapse more than 10 centimeters.

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