Outcome of surgery for rectal cancer in octogenarians

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Peer reviewed article

Outcome of surgery for rectal cancer in octogenarians

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Summary

Introduction: the aim of this study was to assess the outcome of surgery for rectal cancer in patients 80 years of age or more.

Methods: a retrospective study of 29 patients older than 80 years, who presented in our institution between 1997 and 2001 with the diagnosis of rectal adenocarcinoma, was undertaken.

Results: median follow-up was 54 (range 27–78) months, and the median age of patients was 85 (range 80–94) years. Twenty-four out of 29 patients (83%) underwent surgery, 23 being operated electively. Twenty out of 24 patients (83%) underwent resection with curative intent, while four patients (17%) had a palliative procedure. Median hospital stay was 13 (range 10–35) days. Postoperative morbidity and mortality were 46% and 12.5%, respectively. However, when considering only elective procedures with curative intent, operative mortality was 5%. At the time of last follow-up, 13 patients were alive, five of them with no evidence of recurrent disease at 5 years, for an overall 2- and 5-year survival rate of 80% and 67%, respectively. Four out of the 7 deaths, which occurred after surgery, were due to medical causes unrelated to cancer.

Conclusion: in our institution, two thirds of patients older than 80 years who presented with rectal cancer underwent surgery with curative intent. In this selected population, good results in terms of short-term survival can be achieved, at the price of an elevated postoperative morbidity. Whenever possible, treatment with curative intent should be considered in patients with rectal cancer, irrespective of the age.

Key words: rectal cancer; elderly; outcome; surgery; stoma

Introduction

The number of elderly patients in Western countries is increasing, as is their life expectancy. In Switzerland, the current life expectancy of people who reach the age of 80 years is estimated at 7.8 years for men and 9.4 years for women [1]. The incidence of colorectal cancer increases with age [2]. Therefore, it is expected that physicians and surgeons will be increasingly confronted to the therapeutic challenge of an elderly patient presenting with symptomatic carcinoma of the rectum.

Advances in anaesthetic and surgical techniques in the past two decades have led to an improved outcome after major surgical procedures and many recent reports encourage a surgical approach for colorectal malignancies in geriatric patients [3, 4]. Data from a recent population-based study in Denmark even suggest that 5-year survival rates are similar among young, middle-age and elderly patients with colorectal cancer [5]. The aim of this retrospective study was to analyse our experience with surgery for rectal cancer in patients 80 years of age or older and to assess the outcome of patients who underwent surgical resection with curative intent.

Methods

Charts of 29 consecutive patients 80 years of age or older, who presented with histologically proven rectal adenocarcinoma in our institution between January 1997 and December 2001, were retrospectively reviewed. The location of the neoplasm was confirmed preoperatively by endoscopy in all patients who underwent an elective procedure. Collected data included age, gender, American Society of Anesthesiologists (ASA) score, incidence of curative or palliative resections, neoadjuvant therapy, opera-

Abbreviations

APR: abdomino-perineal resection

LAR: low anterior resection

No financial support declared.

tive procedure, postoperative complications, operative mortality (defined as death within 30 days of operation) and length of hospital stay.

After hospital discharge, patients were either entered into a follow-up program with the Surgical Oncology Unit at University Hospital Geneva, or were seen by their general practitioners. Typically, we consider standard follow-up after curative resection of colorectal cancer an assessment of the following parameters: serum CEA level (every three months during the first two years and every six months thereafter); colonoscopy at 1, 3 and 5 years; and abdominal CT scan and chest X-ray at the same intervals. We do not follow rectal cancer patients with endorectal ultrasound because we have experienced extreme difficulty with this technique in differentiating local recurrence form normal scar tissue in the pelvis.

The primary endpoint for this analysis was overall survival, defined as time from surgery to death. Follow-up was available for all patients at the date set for collecting data, December 2003. The median follow-up was 54 (range 27–78) months. Survival rates were determined for both groups of patients who underwent rectal resection with curative or palliative intent. Survival data were collected from the Geneva Cancer Registry, and survival percentages over time were calculated by the Kaplan-Meier method using STATISTICA version 5.5 Software for Windows (Statsoft, Tulsa, OK).

Results

Between January 1997 and December 2001, 29 consecutive patients 80 years or more of age were treated in our institution with the diagnosis of rectal adenocarcinoma. There were 23 women and 6 men, with a median age of 85 (range 80–94) years. Symptoms were present in 28 out of 29 patients. The most frequent presenting symptoms were rectal bleeding (69%) and change in bowel habits (45%). Others presenting symptoms were abdominal pain, asthenia, faecal incontinence, and tenesmus. Nineteen patients (65%) had significant comorbid conditions including hypertension (n = 12, 41%), ischaemic heart disease (n = 8, 28%), diabetes (n = 5, 17%), and chronic renal failure (n = 2, 7%).

Twenty-four out of these 29 patients underwent surgery. The clinical features of the five patients who were not operated are summarised in table 1. Twenty-three patients were operated electively and one patient, who presented with large bowel obstruction, underwent an emergency procedure. Among 24 patients who underwent surgery, 20 (83%) underwent rectal resection with a curative intent. Four patients (17%) had a palliative procedure (defunctioning colostomy). Figure 1 summarises the distribution between operated and non-operated patients and the respective incidence of radical and palliative resections. TNM stage distribution in patients who underwent proctectomy (transanal excision excluded) is summarised in table 2. For the whole group (curative and palliative resections), the overall operative mortality and morbidity were 12,5% (3/24 patients) and 46% (11/24 patients), respectively. Postoperative complications are summarised in table 3.

Twenty (14 women and 6 men with a median age of 84 years) out of 29 patients (69%) finally underwent surgical treatment with curative intent. Fourteen (70%) patients were classified as either ASA III or IV. The distance from the lesion to the anal margin was ≥10 cm in 5 cases, 6–9 cm in 5 cases and ≤5 cm in 10 cases. Eight patients with stage II or III tumours (as demonstrated by preoperative endorectal ultrasonography and/or abdominal CT-scan) underwent neoadjuvant radiation therapy. The following procedures were performed: abdomino-perineal resection (APR) in 7 cases, low anterior resection (LAR) in 7 cases, Hartmann operation in 2 cases, transanal excision in 4 cases. A Hartmann procedure was performed in 2 patients with impaired anal sphincter function demonstrated by preoperative anorectal manometry. Eight patients underwent additional operative procedures, such as: appendectomy (n = 5); cholecystectomy (n = 1); hernia repair (n = 1); salpingectomy (n = 1); and liver biopsy (n = 1).

Considering only elective procedures with curative intent, operative mortality was 5% (1/20 patients). At the time of last follow-up, 13 patients were alive, 5 of them with no evidence of recurrent disease at 5 years; 2- and 5-year overall survival rates according to Kaplan-Meier survival distribution were 80% and 67% respectively (figure 2). The median survival was 1.5 months in patients operated with palliative intent, while there were more than 50% of patients treated with curative intent who were alive at 5 years. Seven deaths occurred 8 months to 5 years after surgery. Four were due to medical causes unrelated to cancer.

Table 1

Reasons for non-operative management.

Patient	Age	Conditions
1	87	patient refused the operation
2	88	metastatic disease, debilitated patient
3	93	patient refused the operation
4	94	debilitated patient, family refused the operation
5	85	metastatic disease, no bowel obstruction

Table 2

Patients distribution according to TNM pathological staging (N = 15). Data missing for 1 patient and staging not evaluated in 4 patients who underwent transanal excision.

TNM Stage	N
T1 N0	1
T2 N0	2
T2 N1	1
T3 N0	5
T3 N1	5
T4 N1	1

Table 3
Postoperative complications.

Patient	Age	ASA	Surgical procedure	Medical Complications	Surgically related complications
1	84	3	Hartmann	urinary tract infection	
2	86	3	APR	urinary tract infection decubitus ulcer	
3	81	3	transanal resection		rectal bleeding
4	86	3	defunctioning colostomy	urinary tract infection	
5	89	3	APR	fever cardiac failure*	
6	88	3	transanal resection	urinary retention	
7	82	3	APR	urinary retention pneumonia	
8	87	3	defunctioning colostomy	sepsis (E. faecalis)	
9	80	2	APR		perineal wound infection
10	82	4	LAR	stroke myocardial infarction	anastomotic leak
11	81	3	defunctioning colostomy	bronchoaspiration acute renal failure**	
12	88	3	defunctioning colostomy	multiple organ failure***	

* Patient died on 15th postoperative day
** Patient died 10th on postoperative day
*** Patient died on 25th postoperative day
ASA: American Society of Anesthesiologists
APR: abdomino-perineal resection
LAR: low anterior resection

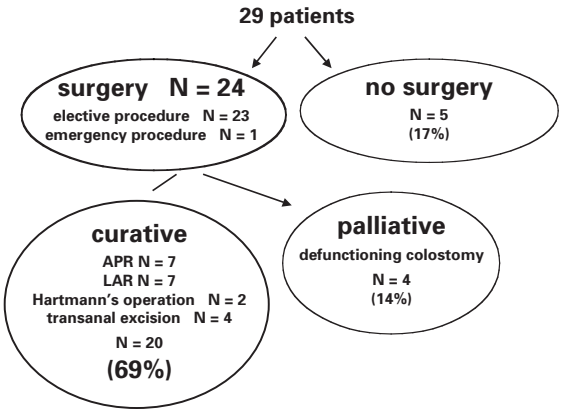

Figure 1
Therapeutic approach in 29 octogenarians with rectal cancer.

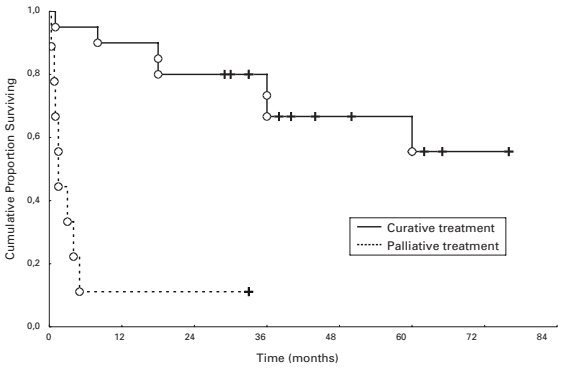

Figure 2
Overall survival in patients treated with curative and palliative intent.
O Patient death
+ End of follow-up

Discussion

The data presented here indicate that two thirds of patients older than 80 years who were referred to our institution with rectal adenocarcinoma underwent surgery with curative intent. In this group, 2- and 5-year overall survival rates were 80% and 67%, respectively. However, these results were achieved at the price of relatively elevated postoperative mortality (5%), morbidity (40%), and colostomy (45%) rates. A majority (57%) of the deaths which occurred within 5 years after surgery were due to medical causes unrelated to cancer.

Our results are in accordance with larger series from Europe [6, 7] which reported curative resections in 60–70% of patients, with 1–8% mortality rates and 30–50% morbidity rates. Two decades ago it was suggested, that 80 years represents a barrier beyond which the postoperative mortality rate is significantly increased [8]; however, it appears that recent advances in perioperative care and surgical techniques have dramatically improved clinical outcome in elderly cancer patients. It is also critical to realise that rectal cancer patients with non-resected or with recurrent tumour in the pelvis have a dismal quality of life; therefore, every patient, irrespective of the age, with a locally advanced rectal cancer should be considered for curative treatment, and as such, evaluated by a colorectal surgeon [9].

The data presented here also indicate that elderly patients with rectal adenocarcinoma have a surprisingly good oncological outcome; in accordance with our results, some authors have reported 5-year overall survival rates ranging from 50–70%,

[10, 11]. This relatively good outcome may be explained by a less biologically aggressive course of the disease [12], by additional benefit from neoadjuvant chemoradiation [13], and by recent improvement in surgical technique [14]. In addition, there is certainly a selection bias, and our study probably focuses on a favourably selected group of elderly, but otherwise healthy patients; by contrast, frail octogenarians with severe associated comorbidity were unlikely to undergo surgical treatment. However, it is interesting to note that 70% of our patients were ASA class 3 or 4.

In our series, 45% of patients underwent either an abdominoperineal resection (APR) or a Hartmann procedure. Similarly high colostomy rates have been reported in other series from various institutions with extensive experience in colorectal cancer surgery [7, 10]; probably owing to fear of a poor functional outcome, elderly patients may be less likely than others to benefit from restorative proctectomy, in favour of more mutilating procedures such as APR. However, a few series have now reported that reconstructive proctectomy with a colonic J-pouch in this population resulted in complete continence rates >70% [15, 16]. Thus, the functional outcome of reconstructive proctectomy in elderly patients with adequate preoperative sphincter function may be quite good; however, constipation may be more frequent in the elderly population, with laxative use being necessary in up to one third of patients [17].

Our results also concur with existing data demonstrating that surgery should not be denied to elderly patients with rectal cancer despite higher postoperative morbidity and mortality rates [18, 19]; actually, these patients are more likely to die from postoperative cardiopulmonary complications, or later from associated medical conditions, than from their primary neoplasm: in a systematic review of 34,000 patients, it was clearly demonstrated that there is a linear correlation between increasing age and the incidence of cardiovascular complications. These findings are in accordance with the elevated morbidity of our study [20]. In conclusion, selected individuals 80 years of age or older with rectal adenocarcinoma, who are reasonably good candidates for elective surgery with curative intent, can achieve excellent long-term survival. Age itself is not a contra-indication for resection, and reconstructive proctectomy should be considered the primary option whenever adequate anal sphincter function has been demonstrated.

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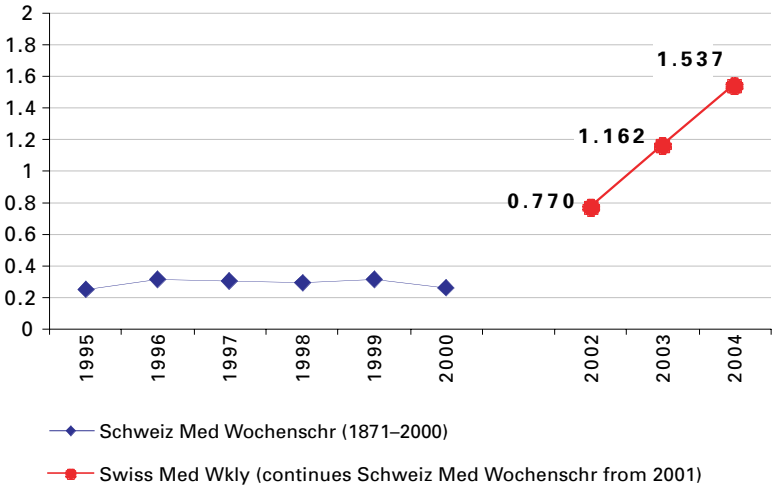

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