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Management and prognosis of locally recurrent rectal cancer – A national population-based study

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Abstract

Background: The rate of local recurrence of rectal cancer (LRRC) has decreased but the condition remains a therapeutic challenge. This study aimed to examine treatment and prognosis in patients with LRRC in Sweden. Special focus was directed towards potential differences between geographical regions and time periods.

Method: All patients with LRRC as first event, following primary surgery for rectal cancer performed during the period 1995–2002, were included in this national population-based cohort-study. Data were collected from the Swedish Colorectal Cancer Registry and from medical records. The cohort was divided into three time periods, based on the date of diagnosis of the LRRC.

Results: In total, 426 patients fulfilled the inclusion criteria. Treatment with curative intent was performed in 149 patients (35%), including 121 patients who had a surgical resection of the LRRC. R0-resection was achieved in 64 patients (53%). Patients with a non-centrally located tumour were more likely to have positive resection margins (R1/R2) (OR 5.02, 95% CI:2.25–11.21). Five-year survival for patients resected with curative intent was 43% after R0-resection and 14% after R1-resection. There were no significant differences in treatment intention or R0-resection rate between time periods or regions. The risk of any failure was significantly higher in R1-resected patients compared with R0-resected patients (HR 2.04, 95% CI:1.22–3.40).

Conclusion: A complete resection of the LRRC is essential for potentially curative treatment. Time period and region had no influence on either margin status or prognosis.

Keywords: Rectal cancer; Local recurrence; Treatment; Treatment intention; Prognosis

Introduction

Locally recurrent rectal cancer (LRRC) is a serious condition, a treatment challenge to oncologists and surgeons and a life-threatening condition to the patient. The prognosis is poor, with overall five-year survival rates of less than 10%. Local symptoms of pain, bleeding and infections cause severe suffering for the patient [1,2]. Some symptoms may be alleviated by radiotherapy or palliative surgery, but only a complete resection of the tumour offers a chance for cure [3].

Due to previous surgery and irradiation, anatomical layers in patients with LRRC are often disrupted, making invasion of adjacent structures common. Tumour involvement of multiple pelvic organs requires a well-planned multidisciplinary management to enable curative treatment. Surgery may be extensive and multivisceral, including extended abdominoperineal resection (APR), pelvic exenteration, sacrectomy

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or hemi-pelvectomy, often followed by permanent stomas. Different reconstructive procedures may involve urologists, plastic and vascular surgeons. Although surgery may be curative it also entails major consequences for the patient's quality of life [4–7].

Studies from specialised tertiary centres indicate that more than 60% of the patients operated for LRRC can be resected with clear margins, and five-year-survival rates of up to 62% have been reported after curative surgery [8–10]. There are few national population-based studies reporting detailed data on patient and tumour characteristics, management and prognosis in patients with LRRC [11]. A recent Swedish study reported that 35% of the patients with LRRC in Sweden receive treatment with curative intent [12]. However, potential differences between geographical regions and time periods have not previously been studied.

The aim of this national population-based study was to assess treatment and prognosis in patients with LRRC and to evaluate potential differences in relation to time periods and geographical regions.

Methods

Study population

Patients with LRRC were identified through the Swedish Colorectal Cancer Registry (SCRCR). Since 1995, this national registry includes detailed clinical information and follow-up data on all patients with primary rectal cancer in Sweden. Date of diagnosis of LRRC is also reported, but there is no information about further management and treatment of the LRRC. Comprehensive information about the registry has been reported previously [13,14].

Fig. 1 illustrates the process to select all patients with LRRC as first event after primary tumour resection. All patients reported with LRRC or distant metastases were first

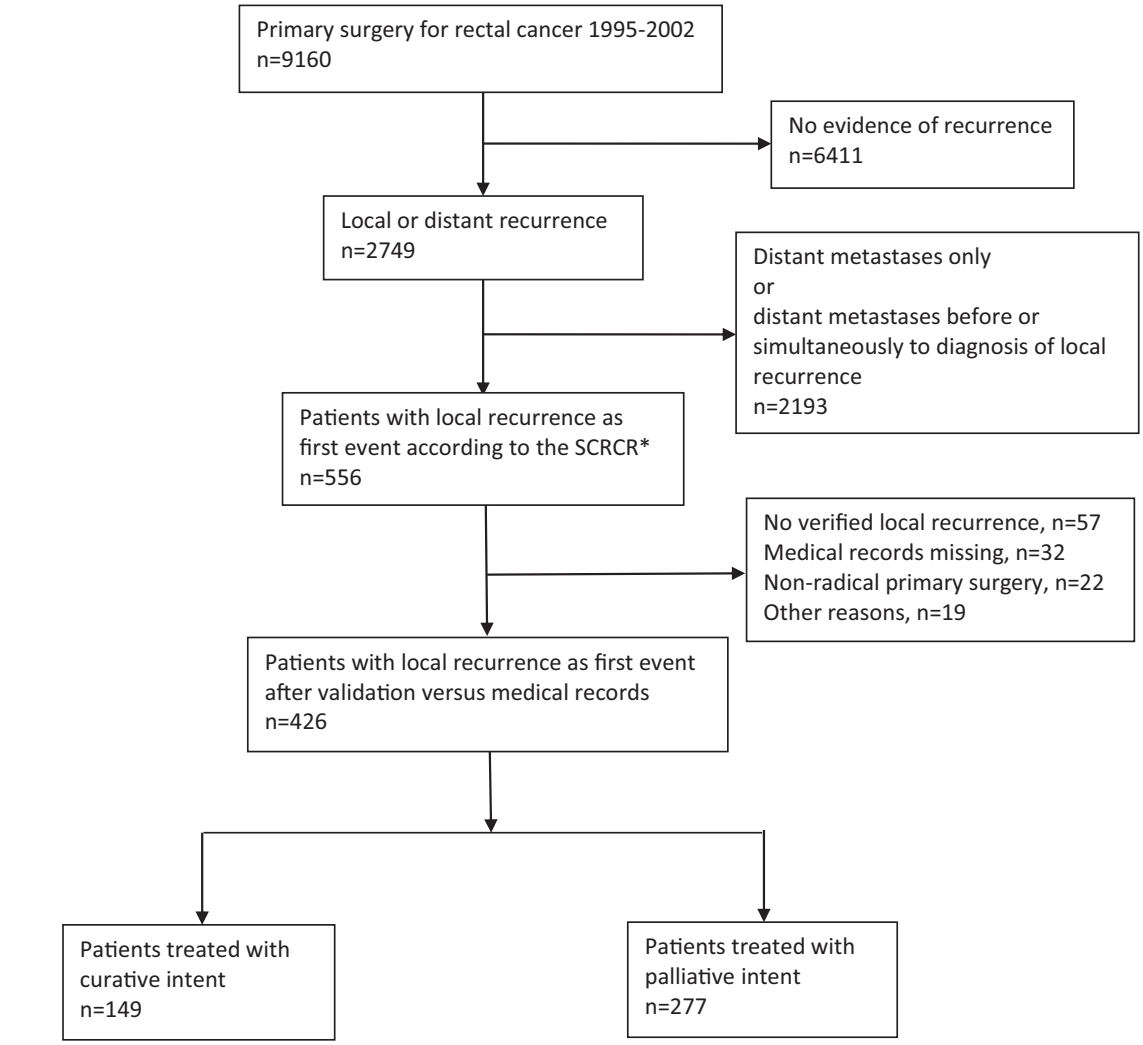

Fig. 1. Flow-chart of the selection of the study cohort.

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