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Prognostic value of pathological complete response after neoadiuvant therapy for locally advanced rectal cancer

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SUMMARY: **Prognostic value of pathological complete response after neoadiuvant therapy for locally advanced rectal cancer.**

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Introduction: *In the European randomized trials of neoadjuvant CRT the rate of complete response ranged from 11-16%. The aim of our analysis was verify whether ypCR predicts a favourable outcome.*

Methods: *234 patients with locally advanced low and mid rectal cancer underwent neoadjuvant chemoradiation Eligibility criteria included locally advanced rectal cancer with no evidence of distant metastases at the time of the diagnosis and evidence of ypCR after the neoadjuvant treatment.*

Results: *37 patients had a complete response and 78 patient were not responders. Median follow up was 60 months. In ypCR patients no locoregional recurrence occured and distant metastases occured in 2 patients (5,4%). In the not responder group we found 18 local recurrence and 46 patients developped distant metastases The ypCR group 5-years overall and disease free survival were 97% and 94% rispectively. During the follow up one patient died.*

Conclusions: *The improved oncological outcome in patients with rectal cancer who achieve a ypCR appears related to their significantly decreased rate of distant failure whencompared with no down staging patients.*

KEY WORDS: rectal cancer, neoadjuvant therapy, prognosis.

Introduction

In the European randomized trials of neoadjuvant CRT the rate of complete response ranged from 11-16% and was significantly greater that for radiotherapy alone. A favorable prognosis was observed for complete pathologic response after preoperative therapy in patients with locally advanced rectal cancer. The aim of our analysis was verify whether ypCR predicts a favorable outcome.

Methods

234 patients with locally advanced low and mid rectal cancer underwent neoadjuvant chemoradiation at the Surgical Department of University Vita-Salute San Raffaele of Milan from January 1998 to December 2007. Eligibility criteria included locally advanced rectal cancer with no evidence of distant metastases at the time of the diagnosis and evidence of ypCR after the neoadjuvant treatment. All patients received the same neoadjuvant treatment with 5-FU and Oxaliplatin. After a median interval of 8 weeks after complatation of neoadjuvant treatment patients underwent a radical resection according to the principles of TME. Standard pathological tumour staging of resected specimen was performed according the AJCC Cancer staging Manual (5th edition) The ypCR was defined by no evidence of viable tumour cell on pathologic analysis. Local recurrence was defined as clinical, radiological or pathological evidence of tumour in any other site. The time to last follow up, local recurrence, or death was measured from the time of radical resection. Statistical analysis was performed using SPSS (version 13.0; SPSS Inc Chicago, IL) Recurrence free survival and overall survival were estimated using the Kaplan Meier method, and differences between survival curves were determinated by using the long rank test. A P value of < 0.05 was considered statistically significant.

Results

37 patients had a complete response and 78 patient were not responders. Sphincher preserervation, antero-

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Table 1 - RECURRENCE RATE IN pCR AND pNC PATIENTS.

	pCR (37)	pNC (78)	p
Mean lymph node number	14.03 ± 7.95	11.81 ± 7.58a	0.262
Local recurrence only	0	18	0.0001
Distant recurrence only	2	46	0.0001

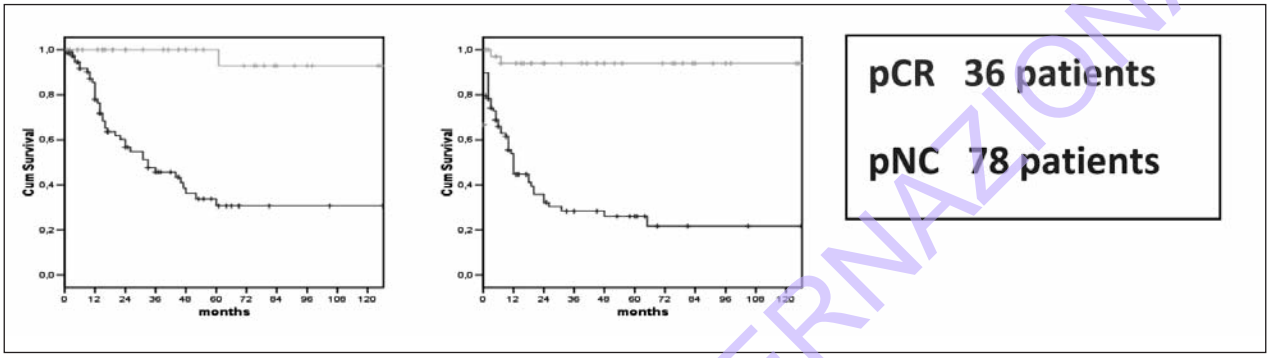

Fig. 1 - Overall and Disease Free Survival (DFS).

posterior resection and endoscopic surgery were performed in 36 patients (97.2%). A patient with complete refused rectal surgery. Mean number of examinated lymphnodes was 14,3 ± 7,95. Median follow up was 60 months. In ypCR patients no locoregional recurrence occured and distant metastase occured in 2 patients (5,4%). In the no responder group we found 18 local recurrence and 46 patients developped distant metastases (Tab. 1).

The pCR group 5-years overall and disease free survival were 97% and 94% rispectively. During the follow up one patient died (Fig. 1).

Conclusions

The improved ontological outcome in patients with rectal cancer who achieve a ypCR appears related to their significantly decreased rate of distant failure when compared with no down staging patients. To further improve the oncological outcomes and sphincter preservation rates in patients with locally advanced rectal cancer, the molecular mechanism governing the rectal cancer response to preoperative CRT need to be explored.