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Rectum

Association of Delayed Surgery With Oncologic Long-term Outcomes in Patients With Locally Advanced Rectal Cancer Not Responding to Preoperative Chemoradiation.

Deidda S, Elmore U, Rosati R, De Nardi P, Vignali A, Puccetti F, Spolverato G, Capelli G, Zuin M, Muratore A, Danna R, Calabrò M, Guerrieri M, Ortenzi M, Ghiselli R, Scabini S, Aprile A, Pertile D, Sammarco G, Gallo G, Sena G, Coco C, Rizzo G, Pafundi DP, Belluco C, Innocente R, Degiuli M, Reddavid R, Puca L, Delrio P, Rega D, Conti P, Pastorino A, Zorcolo L, Pucciarelli S, Aschele C, Restivo A.

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IMPORTANCE

Extending the interval between the end of neoadjuvant chemoradiotherapy (CRT) and surgery may enhance tumour response in patients with locally advanced rectal cancer. However, data on the association of delaying surgery with long-term outcome in patients who had a minor or poor response are lacking.

OBJECTIVE

To assess a large series of patients who had minor or no tumour response to CRT and the association of shorter or longer waiting times between CRT and surgery with short- and long-term outcomes.

DESIGN, SETTING, AND PARTICIPANTS

This is a multicenter retrospective cohort study. Data from 1701 consecutive patients with rectal cancer treated in 12 Italian referral centers were analysed for colorectal surgery between January 2000 and December 2014. Patients with a minor or null tumour response (ypT stage of .02 to 3.0 or ypN positive) stage greater than 0 to neoadjuvant CRT were selected for the study. The data were analysed between March and July 2020.

EXPOSURES

Patients who had a minor or null tumour response were divided into two groups according to the wait time between neoadjuvant therapy end and surgery. Differences in surgical and oncological outcomes between these two groups were explored.

MAIN OUTCOMES AND MEASURES

The primary outcomes were overall and disease-free survival between the 2 groups.

RESULTS

Of a total of 1064 patients, 654 (61.5%) were male, and the median (IQR) age was 64 (55-71) years. A total of 579 patients (54.4%) had a shorter wait time (8.0 weeks or less) 485 patients (45.6%) had a longer wait time (greater than 8 weeks). A longer waiting time before surgery was associated with worse 5.0- and 10-year overall survival rates (67.6% [95% CI, 63.1%-71.7%] vs 80.3% [95% CI,

76.5%-83.6%] at 5.0 years; 40.1% [95% CI, 33.5%-46.5%] vs 57.8% [95% CI, 52.1%-63.0%] at 10 years; $P < .001$). Also, delayed surgery was associated with worse 5.0- and 10-year disease-free survival (59.6% [95% CI, 54.9%-63.9%] vs 72.0% [95% CI, 67.9%-75.7%] at 5.0 years; 36.2% [95% CI, 29.9%-42.4%] vs 53.9% [95% CI, 48.5%-59.1%] at 10 years; $P < .001$). At multivariate analysis, a longer waiting time was associated with an augmented risk of death (hazard ratio, 1.84; 95% CI, 1.50-2.26; $P < .001$) and death/recurrence (hazard ratio, 1.69; 95% CI, 1.39-2.04; $P < .001$).

CONCLUSIONS AND RELEVANCE

In this cohort study, a longer interval before surgery after completing neoadjuvant CRT was associated with worse overall and disease-free survival in tumours with a poor pathological response to preoperative CRT. Based on these findings, patients who do not respond well to CRT should be identified early after the end of CRT and undergo surgery without delay.

