

Vegetating Lesions that Appear in the Scar after Neoadjuvant Therapy for Rectal Tumors: Tumor Regrowth or Benign Neoplasm?

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Abstract

Introduction After the diagnosis of neoplasm of the middle and distal rectum, patients are often submitted to oncological treatment by neoadjuvant therapy. At the end of this treatment, those patients who show complete clinical response can choose, together with their physician, to adopt the watch-and-wait strategy; although it implies lower morbidity for the patient, this strategy is dependent on strict adherence to treatment follow-up for the early identification of any future local injury.

Materials and Methods Survey of data from medical records and description, and discussion of case reports with a literature review in books and databases.

Results We report the case of a 73-year-old patient diagnosed with moderately differentiated adenocarcinoma of the middle rectum, Stage II (cT3bN0M0), who presented complete clinical response after undergoing treatment with neoadjuvant therapy.

Together with the assistant team, the watch-and-wait strategy was chosen. During the follow-up, an endoscopic examination showed a vegetating at the proximal limit of the tumor scar. We chose to perform submucosal endoscopic dissection. The report of the anatomopathological examination evidenced a serrated adenoma with narrow margins free of neoplasia.

Conclusion Patient adherence to cancer treatment using the watch-and-wait strategy is essential for the early identification of new local lesions. After resection of the lesion identified in the tumor scar site as a neoplasm-free lesion, it is consistent to think that this lesion would be the origin of the neoplasm, given the adenomatous origin.

Keywords

- ▶ neoadjuvant therapy
- ▶ adenocarcinoma
- ▶ rectum
- ▶ tumor scar

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Introduction

The watch-and-wait strategy used for medium and distal rectal tumors with complete clinical response after neoadjuvant therapy aims to preserve the organ, avoiding conventional surgery and morbidities inherent to the procedure in up to 70% of patients.^{1,2} The results are promising but depend on strict and responsible follow-up, agreed between the coloproctologist and the patient.

The diagnosis of complete response still involves a great deal of subjectivity; it is based on physical and proctological examinations, initially at short intervals, showing disappearance of the tumor, without palpable nodules or stenoses that prevent the passage of the rectoscope. The endoscopic examination should demonstrate a regular, whitish scar with typical telangiectasia, without residual ulcers or vegetating areas.

Magnetic resonance imaging (MRI) scans, performed at intervals, should confirm the disappearance of the tumor and neoplastic lymph nodes.³ Some patients are diagnosed with tumor regrowth and are submitted to a surgical approach, usually rectosigmoidectomy with total excision of the mesorectum, but local resection of the tumor is also possible in well selected cases.^{4,5} Some patients may present lesions that should not be approached as a malignant lesion, and are submitted to resections with lower morbidity, even if technically complex.

Case Report

We herein present the case of a 73-year-old female patient with histological diagnosis of moderately-differentiated adenocarcinoma of the middle rectum, EC II (cT3bN0M0). The lesion, with a vegetative appearance, occupied ~ 75% of the circumference of the organ, with a distal limit of 5 cm above the anal verge and a longitudinal extension of 5 cm, which could withstand the passage of the colonoscope. The initial level of carcinoembryonic antigen (CEA) was of 1.84 (► Figs. 1–2).

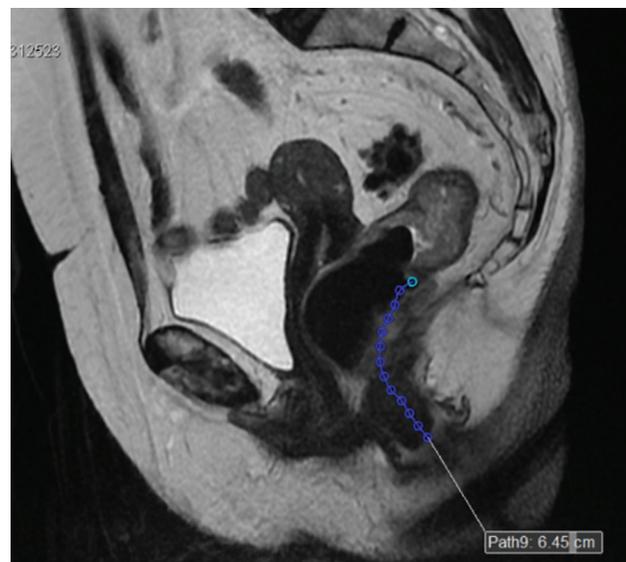


Fig. 1 Sagittal section on magnetic resonance imaging showing vegetative lesion in the middle part of the rectum (MRI).

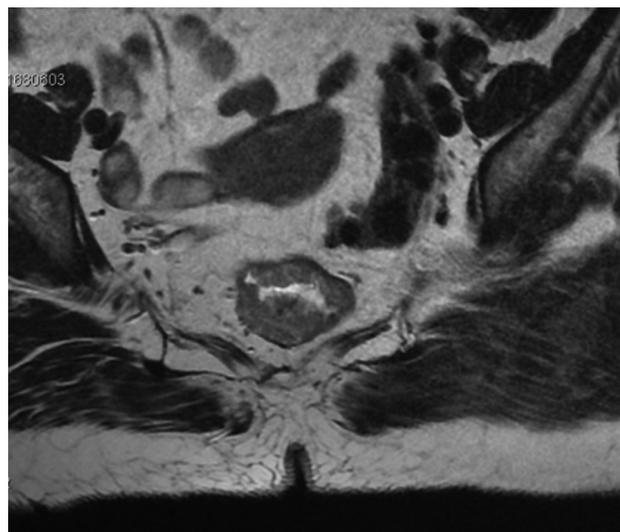


Fig. 2 Axial section on magnetic resonance imaging showing a vegetative lesion in the middle part of the rectum.

Neoadjuvant therapy was performed with 5-fluorouracil/leucovorin (5FU/LV, in doses of 350 mg/m² and 20 mg/m², respectively) on days 1 to 5 in the first and fifth weeks, concomitantly with pelvic radiotherapy with 50.4 Gy, in 28 fractions.

Flexible rectosigmoidoscopy at 9 weeks and 5 days after the end of neoadjuvant therapy showed a clear, flat, and regular scar just below the second valve of Houston. The digital rectal examination evidenced an indelible relief on the right posterolateral wall, 5 cm from the anal verge (► Figs. 3–4).

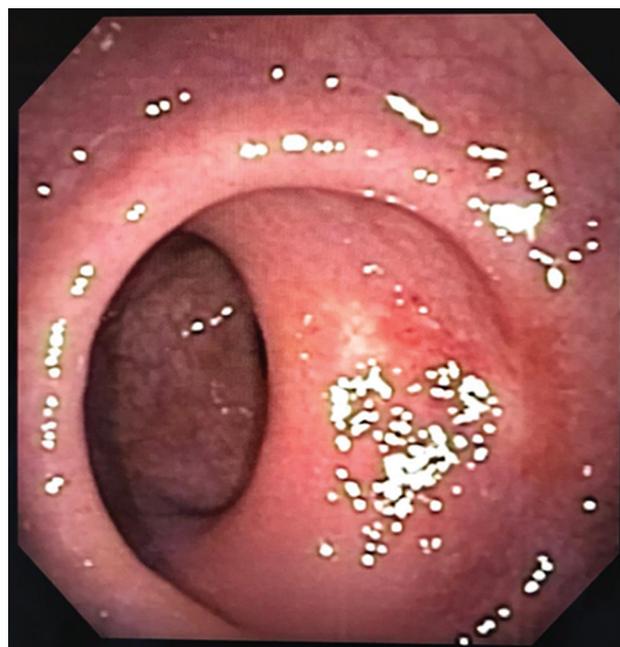


Fig. 3 Flexible retosigmoidoscopy 9 weeks and 5 days after the end of neoadjuvant therapy, showing the region right below the second valve of Houston.



Fig. 4 Follow-up endoscopic image presenting a clear, flat and regular scar in the treated region.

An MRI in the 16th week showed disappearance of the lesion, which enabled the inclusion of the patient in the watch-and-wait protocol. An MRI in the third month of follow-up after neoadjuvant therapy did not show signs of active neoplasia (►Fig. 5).

During the endoscopic examination in the 28th week of follow-up, a vegetating lesion was identified close to the proximal limit of the tumor scar, measuring ~ 15 mm in length. Although the main suspect was tumor regrowth,



Fig. 5 An MRI scan in the third month of follow-up after neoadjuvant therapy not showing signs of active neoplasia.

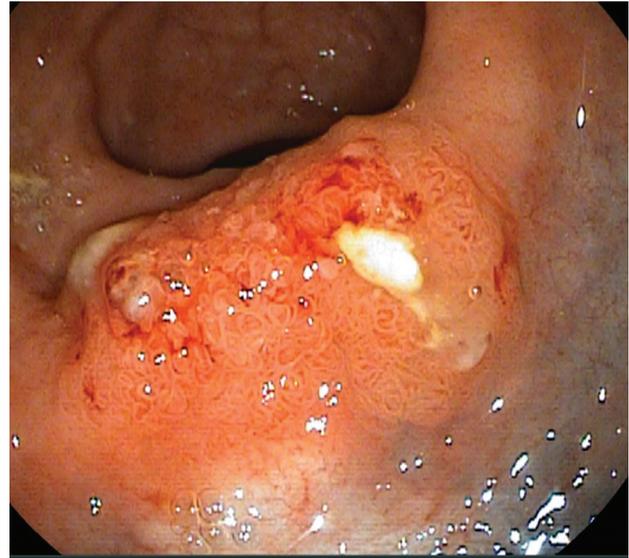


Fig. 6 Endoscopic examination in the 28th week of follow-up, showing a vegetating lesion close to the proximal limit of the tumor scar, measuring ~ 15 mm in length.

we observed that the opening of the crypts was of Kudo classification type III L, suggestive of regrowth of a possible flat area of residual adenoma with lateral growth (►Fig. 6).

We opted for resection of the lateral growth lesion by means of endoscopic submucosal dissection (ESD) encompassing the probable adenoma and part of the tumor scar, which was resected in greater depth (►Figs. 7–10).

The anatomopathological study showed a serrated adenoma with narrow but free margins, and the fragment of the scar did not show areas of regrowth of the original adenocarcinoma, only fibrosis (►Figs. 11–12).

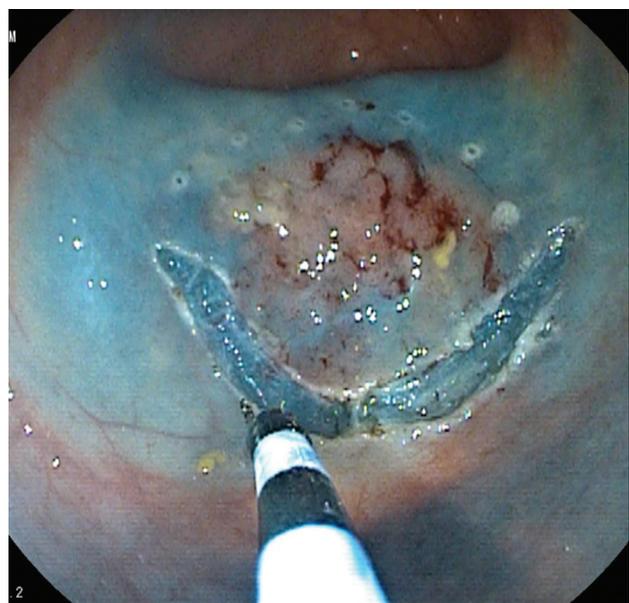


Fig. 7 Demarcation of rectal lesion resection area with electro-surgical knives.

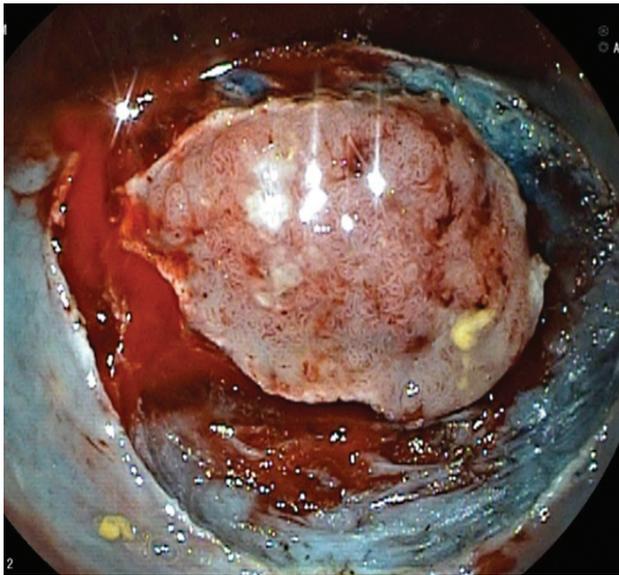


Fig. 8 Endoscopic submucosal dissection encompassing a vegetating lesion and part of tumor scar.

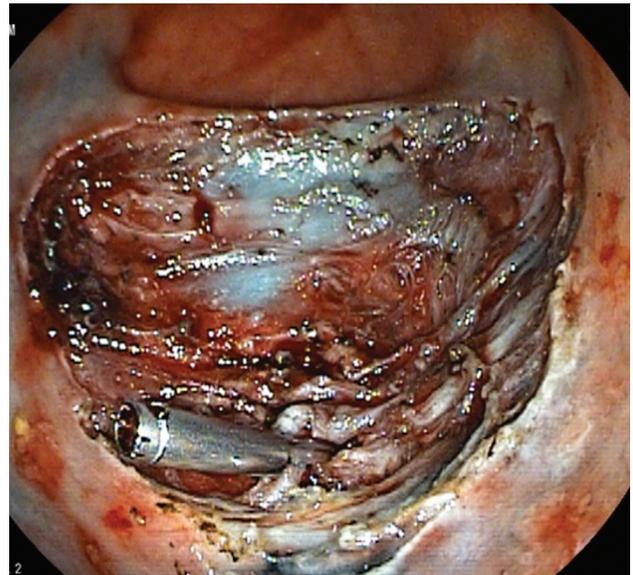


Fig. 10 Final aspect of rectal lesion resection by ESD.

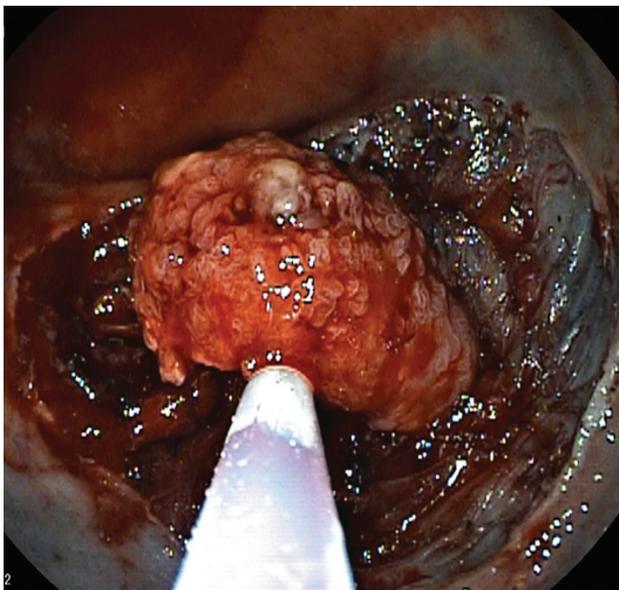


Fig. 9 Endoscopic image showing the resection with great depth of vegetative lesion.

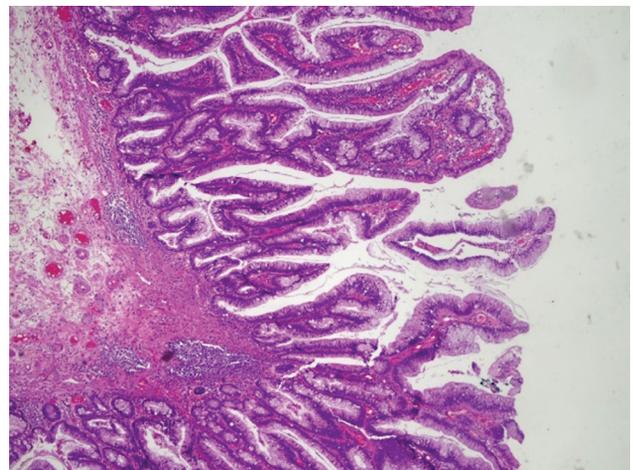


Fig. 11 Hematoxylin and eosin stained slide showing serrated adenoma with free margins.

Discussion

Surveillance of the patient undergoing the watch-and-wait protocol is essential for the early diagnosis of an eventual tumor regrowth that enables rescue surgery, without alterations in cure rates.^{6,7} In a very selective way, patients with endoscopic and radiological signs of tumor regrowth can be submitted to minimally-invasive surgeries in an attempt to preserve the rectum and have acceptable results in terms of cure and morbidity.^{3,8,9}

However, it should be remembered that most colorectal malignant tumors may present remnants of adenomatous tissue from their origin, which is not adequately sensitive to radiotherapy and chemotherapy.¹⁰

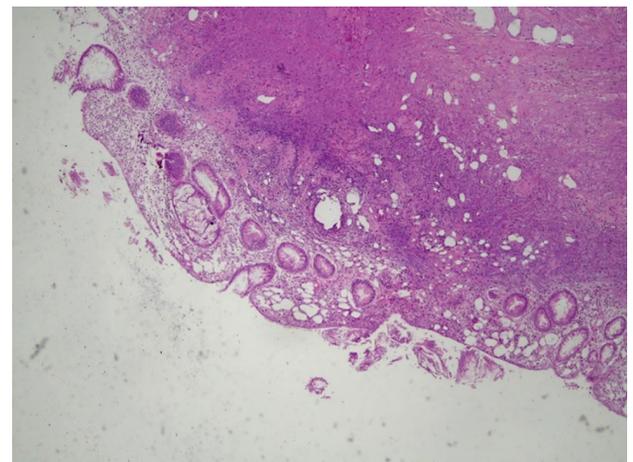


Fig. 12 Hematoxylin and eosin stained slide showing fibrosis in scar fragment.

Therefore, it is consistent that there may be development of benign neoplasia after complete response to neoadjuvant therapy. This reinforces the need for a thorough and specialized endoscopic evaluation, by experienced teams, so that the safe opportunity of preserving the organ in the treatment of malignant tumors of the rectum is not unnecessarily denied.

Conflict of Interests

The authors have no conflict of interests to declare.

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