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Original Article

Locally Advanced Rectal Cancer: Preliminary Results of Rectal Preservation After Neoadjuvant Chemoradiotherapy☆

Carlos Alberto Vaccaro,[a,] Federico Julio Yazyi,[a] Guillermo Ojra Quintana,[a] Juan Pablo Santino,[b] Mabel Edith Sardi,[c] Damián Beder,[a] Joaquin Tognelli,[a] Fernando Bonadeo,[a] José María Lastiri,[c] Gustavo Leandro Rossi[a]*

[a] *Servicio Cirugía General, Sector de Coloproctología, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina*
[b] *Servicio Anatomía Patológica, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina*
[c] *Servicio Oncología Radiante, Hospital Italiano de Buenos Aires, Buenos Aires, Argentina*

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ABSTRACT

Introduction: The standard treatment for locally advanced rectal cancer is total mesorectal excision. However, organ preservation has been proposed for tumours with good response to neoadjuvant treatment. The aim of this study was to evaluate the oncologic results of this strategy.

Methods: This is a retrospective cohort study (2005–2014) including a consecutive series of patients with rectal adenocarcinoma with complete or almost complete clinical response after preoperative chemo-radiotherapy, that were treated according to a strategy of preservation of the rectum.

Results: A total of 204 patients with rectal cancer received neoadjuvant therapy. Thirty (14.7%) had a good response and were treated with rectal preservation (23 ''Watch and wait'' and 7 local resections). Median follow-up was 46 months (interquartile range: 30–68). In the group of ''Watch & Wait'', 4 patients had local recurrence before 12 months (actuarial local recurrence rate=18.5%). All of them underwent salvage surgery (2 with radical surgery and 2 local resections) without any further recurrence. Disease-free survival actuarial rate at 3 years follow-up was 94.1% (95% CI 82.9–100). None of the 7 patients that were treated by local excision had local recurrence. The organ preservation rate for the whole group was 93%.

Conclusion: The strategy of organ preservation in locally advanced rectal cancer is feasible in cases with good response to neoadjuvant therapy. When implemented in a highly selected group of patients this strategy is associated with satisfactory oncologic results.

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* *Corresponding author.*
E-mail address: carlos.vaccaro@hospitalitaliano.org.ar (C.A. Vaccaro).

Cáncer de recto localmente avanzado: resultados preliminares de la preservación del recto después de quimiorradioterapia neoadyuvante

Palabras clave:
Cáncer de recto
Neoadyuvancia
Tratamiento conservador
«Watch and wait»
Resección local
Respuesta clínica completa

RESUMEN

Introducción: El estándar de tratamiento del cáncer de recto localmente avanzado es la escisión total del mesorrecto. Sin embargo, la preservación del órgano ha sido propuesta para los tumores con buena respuesta al tratamiento neoadyuvante. El objetivo de este estudio es investigar los resultados oncológicos de esta estrategia.

Métodos: Se realizó un estudio de cohorte retrospectivo, en el que se analizó a los pacientes con adenocarcinoma de recto tratados con intención curativa entre 2005 y 2014 que, después de recibir quimiorradioterapia neoadyuvante, presentaron una respuesta clínica completa o casi completa y fueron tratados con preservación del recto.

Resultados: Durante el periodo de estudio, 204 pacientes con cáncer del recto recibieron neoadyuvancia. Treinta (14,7%) presentaron una respuesta clínica completa o casi completa y se trataron según una estrategia de preservación de órgano (23 *watch & wait* y 7 resecciones locales). La mediana de seguimiento fue de 46 meses (rango intercuartil: 30-68). En el grupo de *watch & wait*, 4 casos presentaron recurrencia local antes del año (tasa actuarial 18,5%). Todos pudieron ser rescatados (2 con cirugía radical y 2 con resecciones locales) sin presentar nuevas recurrencias. El índice de supervivencia libre de enfermedad a distancia a 3 años fue de 94,1% (IC 95%: 82,9-100). De los 7 casos que se trataron mediante resección local, ninguno presentó recurrencia local. Considerando toda la muestra, la proporción de conservación de órgano fue del 93%.

Conclusiones: La estrategia de preservación de órgano en el cáncer rectal localmente avanzado es factible en casos con buena respuesta a la neoadyuvancia. Implementada en un grupo altamente seleccionado de pacientes, se asocia con resultados oncológicos satisfactorios.

Introduction

Total mesorectal excision (TME) is currently the only accepted curative treatment for locally advanced rectal cancer. However, some surgical groups[1,2] have reported oncologically satisfactory results with local resection after neoadjuvant treatment in select patients who were not apt for surgery. Meanwhile, Habr-Gama et al. have described acceptable long-term results using a non-surgical watch-and-wait approach in patients who presented complete clinical response after neoadjuvant chemoradiotherapy (CRTx).[3–5] Although the intention to preserve the rectum has demonstrated oncological results similar to radical surgery in selected cases,[6] the role of this strategy is still controversial.

The objective of the present study is to report the long-term oncological results of a rectum-preserving strategy after neoadjuvant CRTx.

Methods

We carried out a retrospective, observational cohort study based on a prospective database of colorectal cancer at a tertiary referral hospital (the Hospital Italiano in Buenos Aires). Patients analysed in this study had received neoadjuvant therapy for tumours of the middle or lower rectum (less than 11 cm from the anal margin) that were locally advanced (extrarectal invasion detected during rectal examination, sphincter invasion, or magnetic resonance imaging [MRI] results showing compromised circumferential resection margin [$\leq$2 mm] or tumour invasion of the mesorectum greater than 5 mm) between January 2005 and June 2014. The patients included for analysis had complete or almost complete clinical response as defined by the Habr-Gama et al. criteria.[7] Complete clinical response was defined by the disappearance of the lesion with or without residual scarring, whitish mucosa or telangiectasia. Near-complete clinical response was defined by the clinical or radiological persistence of a lesion smaller than 2 cm that was mobile and non-ulcerated.

Preoperative staging was determined by rectal examination, colonoscopy, computed tomography (CT) scans of the thorax, abdomen and pelvis, and high-resolution diffusion MRI and CEA. The tumour distance to the anal margin was measured by rectal examination and rigid rectoscopy. Neoadjuvant therapy involved 5040 cGy divided into 180 cGy per day, 5 days per week and 6 cycles of chemotherapy with 5-fluorouracil (1000 mg/m^2/day) as well as leucovorin (25 mg/m^2/day). The evaluation of the clinical response took place between 8 and 12 weeks after the end of radiotherapy and included rectal examination and rectoscopy.

Patients with complete clinical response were re-evaluated with rectoscopy, CEA, MRI and CT scan. When the study results were negative, patients were offered the non-surgical treatment protocol. Patients with near-complete clinical response were treated with radical surgery or local resection, depending on the height of the lesion or patient/surgeon preference.