

Rectal cancer treatment

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IMPACT PARAGRAPH

In this chapter, the scientific and social impact of the results provided in this thesis will be discussed by the following four aspects: 1. research; 2. relevance; 3. target group; 4. activity.

Research

The research described in this thesis provides new insights on Watch-and-Wait and organ-preserving treatment strategies for patients with rectal cancer. This thesis focusses on the quality of life of patients followed by Watch-and-Wait, the definition of a near-complete response, and organ-preserving treatment with contact x-ray brachytherapy (CXB). The main outcome and conclusions of this thesis are: 1. The quality of life of patients followed by Watch-and-Wait who do not require additional surgery is good with limited variation over time. Functional problems, such as bowel and sexual dysfunction do occur, however, less compared to patients treated with additional surgery; 2. Watch-and-Wait can be considered in a selected group of stage IV rectal cancer patients with a (near-)complete response in the rectum following radiotherapy in spite of the relatively high regrowth rate observed in these patients; 3. There is a variety in criteria and features used to define a near-complete response following neoadjuvant (chemo)radiotherapy, which can partly be explained by the different therapeutic options patients with a near-complete response are selected for; 4. A three-tier categorization of a near-complete response is established by expert-based consensus to reach more uniformity regarding the definition of a near-complete response; 5. CXB is an alternative treatment option to avoid TME in older or inoperable rectal cancer patients as CXB is well-tolerated by this patient group and provides a good control of the local tumour; 6. An early distinction between a cCR and residual tumour following CXB is difficult to make, generally, this distinction can be made after six months of follow-up. Features indicative for residual tumour are tumour mass on endoscopy, focal tumour signal on T2W-MRI, and mass-like high signal on DWI.

Relevance

The results of this thesis are of relevance for clinical practice and shared decision making and for future research. As the landscape of rectal cancer treatment is expanding with increasingly more organ- preserving treatment options, it is an increasingly difficult task to choose the optimal treatment strategy for the individual patient. The quality of life data provided in this thesis are useful in this decision process, to optimal inform patients on the potential benefits of Watch-and-Wait and on what to expect from organ-preservation. Furthermore, clinical practice might be changing as the results in this thesis show that Watch-and-Wait for stage IV rectal cancer patients

and CXB for older or inoperable patients can be considered as alternative for TME surgery. This thesis also provides data to help clinicians to identify patients with residual tumour following CXB. This is relevant as these patients should be referred for TME surgery as early as possible. Last, the expert-based consensus on the definition of a near-complete response can guide future research to gather more evidence on the predictive value for successful organ-preservation of the three subcategories.

Target group

The outcome and conclusions of this thesis are of interest for patients and clinicians. Firstly, for the rectal cancer patients with a cCR following neoadjuvant (chemo) radiotherapy who are considered for Watch-and-Wait. However, the results in this thesis are also relevant for patients with a near-complete response or small residual tumour who might be considered for additional organ-preserving treatment strategies. Furthermore, stage IV rectal cancer patients with a clinical (near-)complete response after pelvic radiotherapy and older or inoperable rectal cancer patients might benefit from the data provided in this thesis. In addition to the patients, clinicians involved in the treatment of rectal cancer, for example surgeons, radiation oncologists, radiologists, gastroenterologists, and oncologists, in the Netherlands and abroad might be interested in the outcome and conclusions presented in this thesis.

Activity

As consequence of the several studies on Watch-and-Wait and organ-preserving treatment strategies for rectal cancer performed in the Netherlands, and funded by amongst others the Dutch Cancer Society, a national study network emerged known as the Dutch Watch-and-Wait network. Worldwide, this active network is recognized as one of the leading study networks regarding the organ-preserving treatment of rectal cancer. The results of the research described in this thesis and the results of former and ongoing research performed by this Dutch Watch-and-Wait network is and will be accessible for patients and clinicians in several manners. First, the website of the Netherlands Cancer Institute and websites of various hospitals in the Netherlands and abroad provide background information on Watch-and-Wait and organ-preserving treatment strategies such as CXB^{1,2}. Furthermore, information on Watch-and-Wait can be found on the website of the organisation for patients with (colo)rectal cancer, Stichting Darmkanker³. In addition, a former rectal cancer patient followed by Watch-and-Wait has written two books, 'Nooduitgang' and 'Dom geluk, vette pech', on his experience and the experience of others with rectal cancer^{4,5}.

Organ-preserving treatment strategies for patients with rectal cancer are currently implemented in the national guidelines, partly due to studies performed by the

Dutch Watch-and-Wait network. Clinicians can consult these national guidelines for information on Watch-and-Wait for clinical practice⁶. Results of research on Watch-and-Wait and organ-preserving treatment strategies are published in multiple journals and presented on national and international congresses and symposia. In addition to these congresses and symposia, there is a yearly Watch-and-Wait symposium at the Netherlands Cancer Institute. Dutch clinicians involved in organ-preserving treatment for rectal cancer are invited to attend this symposium to share knowledge and to strengthen the Dutch Watch-and-Wait network. Internationally, there is a five-yearly congress organized by the International Watch-and-Wait Database (IWWD) to get updated on the latest insights on Watch-and-Wait and organ-preservation.

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