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Editorial

Specialized Referral Centers for Rectal Cancer[☆]



El terciarismo en el cáncer de recto

Rectal cancer (RC) treatment has evolved considerably in recent years. Advances made in preoperative extension studies using magnetic resonance now enable us to carefully select patients for neoadjuvant therapy and determine the most appropriate surgical technique. Furthermore, there is now clear evidence of the impact of surgery on short- and long-term results, which has led to a growing precision in intraoperative care by surgeons who specialize in the treatment of this disease.

New aspects and approaches have been introduced in the surgical technique, including the implementation of total mesorectal excision, laparoscopic resection, robotic surgery, transanal microscopic resection and, most recently, “down-to-up” transanal proctectomy.

In spite of these technical advances, surgical treatment of lower-third rectal cancer continues to be an important challenge for colorectal surgeons. Although abdominoperineal resection is still the most frequently performed standard intervention,^{1,2} there is a growing tendency to treat distal tumors with sphincter-preserving surgery. These procedures can vary from ultra-low anterior resection to intersphincteric resection with manual coloanal anastomosis or two-stage reconstruction (Turnbull-Cutait).

Essential factors for selecting the most appropriate surgery include the surgeon’s experience and technical skills, which are a result of his/her abilities and specialized dedication to rectal neoplastic disease together with a constant flow of patients. Detailed, multidisciplinary, clinical-radiological patient evaluations are also fundamental, while the balance between guaranteed oncologic results, sphincter preservation and patient quality of life must also be considered.³

Thanks to the advances made in pathological study methods of rectal tumors and the special dedication of pathologists, surgeries are also objectively evaluated by means of histologic parameters, such as the quality of the

mesorectal excision and the involvement of the circumferential margin.

In complex diseases, the correlation between the quality of surgical outcome and case volume justifies the proposal to centralize patients in tertiary referral hospitals. Furthermore, these hospitals with large caseloads, as well as their expert surgeons who are specially dedicated to complex diseases, are subjected to the quality control of external audits.⁴

The concept of “tertiary care” or “centralization” refers to the concentration of selected patients in referral units with specialized surgeons. These units therefore treat a larger number of patients and achieve final results that are beneficial for both patient health and the economic situation of the healthcare system.

In the case of RC, in general terms, the impact of the volume of cases treated on the final results is uncertain. To determine whether there is a real need for centralizing patients with RC, we should assess whether the main predictive factor for these positive results is the number of cases treated at a hospital or whether it is the surgeon.⁵

By analyzing the surgical results based on the number of patients treated by a surgeon, the literature indicates three scenarios: surgeons with a high, moderate or low number of cases. Although there are reports of very wide ranges in the number of cases, there is agreement that patients treated by surgeons who operate on a high case volume present lower mortality, lower abdominoperineal resection rates and longer survival. It can be concluded that the organization of units with high case volumes leads to more experienced surgeons and better results,^{6,7} while the training of other surgeons is improved.

When the results are analyzed by the number of cases treated at a hospital, there is still a lack of uniformity when establishing the volume of cases per hospital. There are hospitals with high, moderate and low volumes, with a number of interventions that ranges from 11 cases to more

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than 100 interventions per year. The general conclusion is that the more cases treated annually, the better the surgical results.^{8,9}

Although other studies do not observe differences between surgical outcomes and case volume per hospital, and while there may be distortion caused by the case selection of each hospital,¹⁰ the centralization of RC treatment, its management by multidisciplinary groups and the specialization of surgeons all correlate with reduced local recurrence and longer survival.¹

A Cochrane review about RC surgery highlights that the best outcomes are reached at hospitals and by surgeons who treat a large number of cases. Nonetheless, there are discrepancies regarding the minimum number of cases that should be treated at a hospital and by a surgeon, and each country should establish its own systems for auditing hospital results and define centralization strategies.¹¹

There is consensus with regard to concentrating certain procedures that are high risk, highly complex and highly technological at referral hospitals. In Europe, diagnosis and treatment algorithms have recently been designed to implement current evidence and define fundamental steps to follow, as recommended by the multidisciplinary groups involved in the treatment of colorectal cancer.¹² However, due to the high prevalence of cases, the centralization of RC patients in specialized units could have certain consequences, such as overloaded units that lead to healthcare collapse.¹³ In order to avoid an excessive increase in the waiting lists of referral units while guaranteeing quality results, patient distribution should be reorganized, the constant relationship between reference hospital and hospitals with fewer cases should be strengthened, and surgical training programs are needed.¹⁴

These initiatives could also be used to select cases that should be treated exclusively at tertiary referral hospitals (advanced rectal cancer and lower-third tumors). The hospitals involved would be able to reach a high degree of efficiency in the treatment of RC, while avoiding the feeling of frustration that frequently affects surgeons at second-level hospitals who treat colorectal disease and feel excluded.

In Spain, a consensus could currently be reached to centralize RC care at hospitals that treat populations of 500,000 inhabitants with a minimum of 60 cases per year, as suggested in the literature.¹⁵

We would like to stress that, throughout the entire clinical process, the patient must be the center of attention. The specialists involved in their treatment have the moral and professional obligation to offer them the best possible options to achieve optimal outcomes.

In conclusion, RC care should be concentrated in specialized units that have adequate technical means. They must be recognized by national accreditation programs, have a minimum number of cases per year and expert colorectal surgeons, and their end results would be subjected to periodic audits. Due to the high prevalence of colorectal disease, a close, constant relationship should be promoted between referral hospitals and smaller hospital centers with fewer cases for optimal patient redistribution.

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