Original Article

Evaluation of quality parameters of rectal cancer surgery at the Coloproctology Unit of Hospital de Braga

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CASTRO MAP, MARTINS SFF. Evaluation of quality parameters of rectal cancer surgery at the Coloproctology Unit of Hospital de Braga. **J Coloproctol**, 2011;31(4): 362-371.

ABSTRACT: Introduction: Rectal cancer (RC) represents 1/3 of all diagnosed colorectal cancers. After the creation of specialized units to treat RC, it became fundamental to establish criteria to assess the quality of the service. Objective: To evaluate the surgical treatment provided to RC patients at the Coloproctology Unit of *Hospital de Braga* (BH-CU) by means of quality parameters. Methods: We conducted an observational cross-sectional descriptive study with a convenience sample of 149 patients undergoing surgical treatment in this unit, from January 1st, 2007 to June 30, 2010. Results: We observed that the postoperative mortality rate (4%) and the global dehiscence rate (14.8%) were in accordance with recommended values. Sphincter sparing surgery rate (65.8%) was higher than the recommended minimum; however, more than 12 resected ganglia (36.6%) is inferior than what is recommended. The oncological results were analyzed by the local recurrence rate (6.7%) and the two-year survival rate (91.1%); both values are in accordance with literature. Conclusion: We conclude that the BH-CU surgical treatment has a quality level similar to that observed in literature.

Keywords: rectal cancer; functional coloproctology unit; quality parameters of surgical treatment.

INTRODUCTION

Colorectal cancer (CCR) is the third most common cancer and ranks the fourth position as a cause of death by cancer worldwide[1-3]. Its incidence is geographically varied, and there are higher rates in North America, Australia and Western Europe. The lower rates are in developing countries[4], but the incidence in these countries[5] has been increasing in the past few years.

According to the World Health Organization (WHO), CCR is the second most common cancer in Europe, followed by lung cancer among males and breast cancer among females[6]. Despite the high incidence, data from WHO from 1997 to 2007 show that mortality caused by CCR decreased[7]. The reduction in mortality rates was mainly due to the advances in knowledge concerning the molecular mechanisms that are responsible for the development and progression of CCR[8] and for the introduction of tracking programs with the population aged more than 50 years[9]. In Portugal, according to the National Institute of Statistics, CCR is the second most common cancer and the main cause of death due to neoplastic disease[10]. It is more common in urban centers, such as Lisbon, Porto and Setubal[11]. To the north of Portugal, data from *Registro Oncológico Regional do Norte* (RORENO) show that CCR was the most prevalent cancer in 2005 for both genders, and the second cause of death due to cancer, after lung cancer[12,13].

Rectal cancer (RC) makes up to 1/3 of the total number of diagnosed cases of CCR[14]. Even though the north of Portugal presents an incidence rate of 24.8/100,000 inhabitants, which is higher to the incidence in Europe (21.2/100,000 inhabitants), the five-year survival rate (53%) has a much closer value to the European mean (53.2%)[12]. The therapeutic approach to RC has been through significant changes in the past decades, going

Study carried out at the Hospital de Braga, Coloproctology Unit, Braga, Portugal.
Financing source: none.
Conflict of interest: nothing to declare.

Submitted on: 06/05/2011
Approved on: 06/13/2011

from a merely surgical treatment to a multidisciplinary approach[15]; however, despite the aforementioned advances, surgical exeresis is still essential[16], since it is the only potentially curative treatment nowadays. There are currently many therapy options related to the location of the cancer; thus, the performance of an anterior rectal resection (ARR) for superior rectal tumors is indicated; a low anterior rectal resection with coloanal anastomosis is indicated for inferior rectal tumors[17]. As to the latter, since this procedure has risk of dehiscence, it is established that is should be complemented with protective ileostomy[18]. The abdominoperineal resection (APR) is currently limited; it is recommended for tumors that present with sphincter infiltration, for cases of fecal incontinence prior to tumoral symptomatology and elderly patients with associated comorbidity that does not allow an anastomosis. The same happens with the Hartmann's operation (HO), which is performed when there are factors that contraindicate anastomosis that would enable the preservation of the sphincters with a safe distal margin[17]. Also, the local transanal resection is only indicated for tumors that are limited to the mucosa and the submucosa (T1N0M0), with no lymphovascular invasion, well or moderately differentiated, with less than 3 cm in diameter and located up to 8 cm from the anal margin (AM)[17]. One of the great advances in the past decades, in terms of surgical treatment for CR, was the introduction of the concept of total mesorectal excision (TME). Heald et al. showed the importance of TME in the two lower thirds of the rectum, with dissection under direct visualization and preservation of the nervous plexus. The introduction of TME enabled the reduction of local recurrence rates for values of 6%, with a five-year survival rate of 80%, and ten-year survival rate of 78%[15]. The decrease in local recurrence rates was due to the fact that TME enabled the resection of RC with a negative circumferential margin[19]. This technique has also led to the improvement in pathological staging of cancer, as well as in the quality of life of the operated patient because of the reduction in the incidence of vesical dysfunction and sexual impotence[14].

The concept of margin is important to be considered in resection with a curative intent. Regarding RC, we should consider the distal, proximal and radial margins, in which the currently accepted values are 1 cm, 5 cm and 1 mm, respectively. The involvement of these margins is associated with increased locoregional recurrence; more specifically, the involvement of the radial margin is associated with a recurrence risk of 56 – 80%, with a five-year survival rate, decreasing from 79 to 40%[20]. Another margin to be considered is the distal margin of the mesorectal dissection, which has an important prognostic value and should be 5 cm distal to the tumor, once it showed the presence of tumor niche 2 to 3 cm below the tumor[17].

As to the surgical treatment of RC, together with negative resection margins, a proper lymphadenectomy is the most important aspect[21]. In this context, it is important to perform a proper lymphadenectomy, with resection of at least 12 ganglia; besides reducing the risk of lymphatic invasion, it also prevents the substaging of the tumor[22].

Despite the improvements observed in the recurrence rate of the resectable RC, the local recurrence is still an issue in cases of locally advanced fixed rectal cancer. The current strategy to treat such cases is multidisciplinary[23]. The primary therapy enables to increase respectability, decrease the locoregional recurrence rate and improve the survival of the patient[19,23]. Thus, the initial treatment for locally advanced RC (T3-4 or N+) consists of the administration of chemotherapy and primary radiotherapy[16,19].

The creation of units that are specialized in treating RC contributed with better results, since it improved the preoperative staging by using: the pelvic magnetic resonance and endoluminal ultrasound; the primary therapy after establishing the dose and proper times of application[24] in cases of locally advanced RC; the implementation of TME as a qualified technique to assess the obtained results[22]; and the establishment of standards concerning anatomopathological tecniques[24]. According to a study conducted in the United States, these changes are reflected in the decreased local recurrence rate, from 9.6 to 6.9%[25]. In a study group from Norway, the implementation of TME showed a decrease in the local recurrence rate, from 12% to 6%, and the survival rate after four years increased from 60% to 73%. The same happened in a randomized study conducted in the Netherlands, in which the local recurrence rate after two years was significantly lower in patients submitted to surgery and radiotherapy (2.4%) than in the group treated only with surgery (8.2%)[16]. Due to this evolution, many European countries, such as Germany, Sweden and Spain, showed the need to define new quality

standards, with the minimum required values, which are essential for the evolution of the diagnosis, staging and treatment of RC, for beyond the ones that are usually used, such as morbidity and mortality[22,24,26].

By studying large samples, some indicators have been established to enable the evaluation of surgical quality concerning the RC treatment; these can be divided into general and specific criteria, and criteria that study oncologic results[27]. General criteria are: postoperative mortality rate, which should be inferior to 5%, ideally between 2 and 3%[24,27], and the global dehiscence rate, whose required value lies between 10 and 15%[22,24,27]. Regarding the sphincter sparing surgery rate, it is recommended to be higher than 65%[24,27], and the number of cases with more than 12 resected ganglia should be higher than 75%[22]; both are considered to be specific criteria. Finally, the criteria that study the oncologic results are assessed by the local recurrence rate, that should be lower than 10%[22,24,27], and the ideal value for the survival rate after two years is between 70 and 80%[24,25]. Besides the aforementioned, these indicators enable a proper evaluation of quality in assistance, because it accounts for the final health status of the patient and its functional capacity[24].

OBJECTIVE

To assess the surgical treatment given to patients with rectal cancer in the Coloproctology Unit of *Hospital de Braga,* from January 1st, 2007, and June 30, 2010, according to quality standards.

METHODS

Population

The study population was comprised of patients treated for RC from January 1st, 2007, to June 30, 2010, at the Coloproctology Unit of *Hospital de Braga*. This study considered as "rectal cancer" all the cases of histopathological diagnosis of adenocarcinoma, located up to 15 cm from the anal margin, measured with the rigid sigmoidoscopy. Inclusion criteria were: patients with histological diagnosis of rectal adenocarcinoma submitted to surgery (local resection, anterior rectal resection, low anterior rectal resection or abdominoperineal resection). Exclusion criteria were: patients with histological diagnosis of rectal adenocarcinoma that did not undergo surgery, or those in which the derivative stoma was performed.

Sample

A convenience sample of 149 patients diagnosed with RC was used, respecting the inclusion/exclusion criteria previously established.

Methods and data collection

Before data collection, the work was submitted to and approved by the Ethics Committee of *Hospital de Braga*. A prospective database of patients diagnosed with RC was consulted; it consisted of sociodemographic data, location of the tumor, treatment of choice, number of resected ganglia, resection margins, presence of postoperative morbidity and data related to the follow-up period as the date of local recurrence and death.

Statistical analysis

All statistical analyses were performed with the 18.0 version of the software *Package for the Social Sciences*, (SPSS Inc. R, Chicago, Illinois, USA). A simple descriptive analysis of all the variables was conducted by defining the total number of cases and the absolute and relative frequencies for valid cases. As for the treatment of continuous quantitative variables (age, distance to anal margin and number of resected ganglia) central tendency (mode and mean) and dispersion (standard deviation [SD]) were measured.

RESULTS

Sample caracterization

From January 1st, 2007, and June 30, 2010, 164 patients with RC were treated at the Coloproctology Unit of *Hospital de Braga*. At first, 15 patients were not eligible for the study, once they were in no conditions to be submitted to surgery (n=7) or in case they had been submitted to the isolated performance of a derivative stoma (n=9). Thus, after the establishment of exclusion criteria, 149 patients were included in the study, that is, 91% of the patients that had been initially identified. As to gender distribution, we observed that 57% of the patients (n=85) were males, and 43% (n=64) were females. Mean age was 68±12 years; among females, it was 66±13 years, and for males it was 70±11

years. Mode was equal to 80 years. After observing the age group analysis, we noticed that most cases, 35.6%, occurs between the ages of 70 and 80 years (n=53) (Figure 1). The most common location of RC was the medium rectum, in 53% of the cases, followed by the lower and upper rectum, in 27.5 and 19.5% of the cases, respectively (Table 1). The mean distance to the anal margin was 8.5±4.3 cm. After staging, 27.5% (n=41) of the patients underwent primary therapy followed by surgery; out of these, chemoradiotherapy was used in 25.5% of the patients (Table 2).

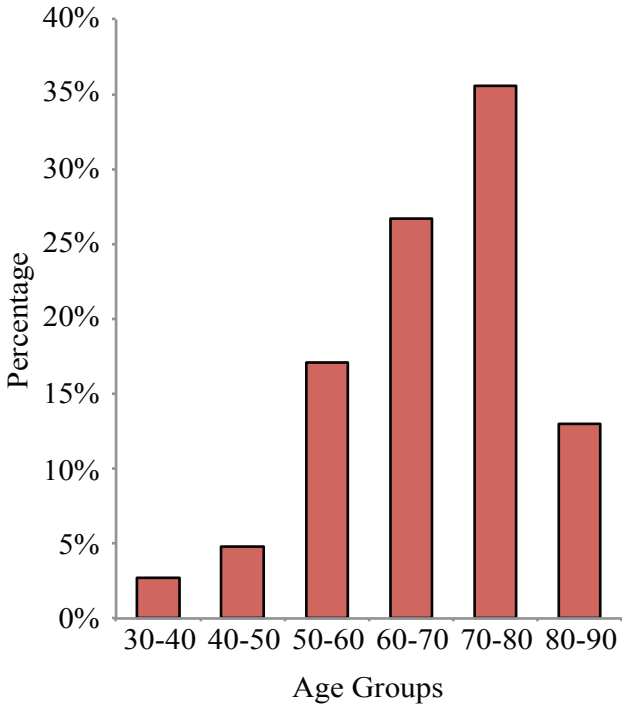

Figure 1. *Distribution of the "Age" variable by age groups.*

Evaluation of surgery quality parameters

Type of surgery

Concerning the performed surgeries, 98.7% (n=147) were elective, and 93.3% (n=139) of the cases, it had a curative intent. The most common surgery was the low anterior rectal resection, 30.2% (n=45), followed by the abdominoperineal resection (22.1%) (n=33). As demonstrated in Table 3, 65.8% of the surgeries were classified as "Sphincter Sparing Surgery".

Anastomotic dehiscence

Out of the 149 studied cases, 22 presented with postoperative morbidity classified as "anastomotic dehiscence". In this group, 9 patients needed surgical reintervention. After crossing the variables "type of surgery" and "anastomotic dehiscence", it was possible to show that the low anterior rectal resection is the surgical procedure that presents the highest global anastomotic dehiscence rate, with 6.8% of the cases; out of these, 3.4% were conservatively treated, and the other 3.4% needed surgical reintervention (Table 4). After analyzing the global dehiscence rate along the years of the study, we observed that 2007 and 2009 presented the highest percentage, with 4.7% of the cases; in 2010, this value decreased (Figure 2). Out of the 22 patients who presented with anastomotic dehiscence, only 1 (0.7%) was submitted to primary radiotherapy.

Postoperative mortality

The postoperative mortality rate was 4.0% (n=6). From these patients, 3 presented with postoperative morbidity characterized as anastomotic dehiscence; two were submitted to conservative treatment, and one underwent surgery.

Table 1. *Characterizing the variable "Anatomical Location".*

Anatomical Location		
	Absolute N° (n)	**Frequency (%)**
Superior rectum	29	19.5
Medium rectum	79	53.0
Inferior rectum	41	27.5
Total	149	100.0

Table 2. *Characterizing the variable "Primary Treatment".*

Primary Treatment		
	Absolute N° (n)	**Frequency (%)**
No primary treatment	108	72.5
CT + RT	38	25.5
CT	1	0.7
RT	2	1.3
Total	149	100

CT: chemotherapy; RT: radiotherapy.

Table 3. *Characterizing the variable "Type of surgery".*

Type of Surgery	Absolute N° (n)	Frequency (%)	Sphincter Sparing Surgery
Low anterior rectal resection	45	30.2	65.8 %
Anterior rectal resection	28	18.8	
Low anterior rectal resection + ileostomy	21	14.1	
Local Resection	4	2.7	
Hartmann's operation	18	12.1	34.2 %
Abdominoperineal resection	33	22.1	
Total	149	100.0	

CT: chemotherapy; RT: radiotherapy

Table 4. *Crossing variables "Type of surgery" and "Anastomotic dehiscence".*

	Absolute N°(n)	Frequency (%)
Dehiscence – Conservative treatment	13	8.8
Low anterior rectal resection	5	3.4
Abdominoperineal resection	5	3.4
Low anterior rectal resection + ileostomy	3	2
Dehiscence – Surgical treatment	9	6.0
Low anterior rectal resection	5	3.4
Abdominoperineal resection	4	2.6
Low anterior rectal resection + ileostomy	0	0
Total	22	14.8

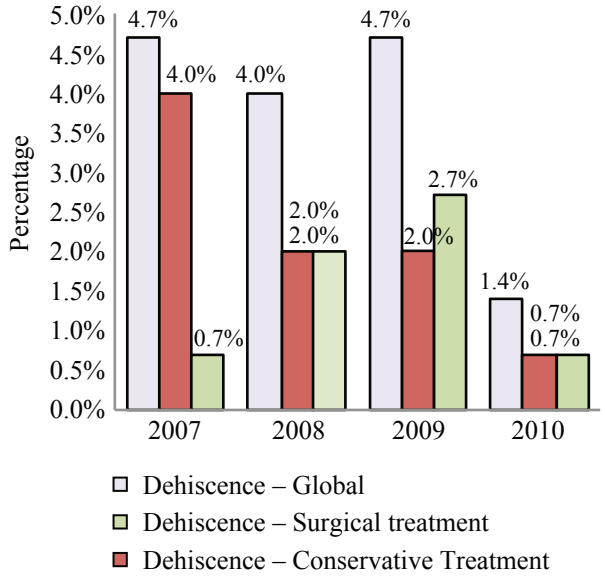

Figure 2. *Evolution of the variable "Anastomotic dehiscence".*

Number of analyzed ganglia

The mean of analyzed ganglia (gg) was 11±7 ganglia, the median was 9.5 and the mode was 6 ganglia.

The analysis of 12 or more ganglia was only observed in 36.6% of the cases (n=49); in the other 63.4% (n=85), an inferior number of ganglia were analyzed. Out of the 41 cases submitted to primary therapy, 70.7% (n=29) presented a number of analyzed ganglia inferior to 12. From the 85 cases with less than 12 analyzed ganglia, 29 cases (34.1%) had primary therapy.

Locoregional recurrence

The global recurrence rate was 6.7% (n=10). The patients submitted to primary therapy presented an inferior recurrence rate, 1.3%, in relation to those who underwent isolated surgery (5.4%).

Survival after 2 years

The survival rate after 2 years was 91.9% in the studied sample.

DISCUSSION

The treatment of RC has progressed for the past few decades[15], and this progress is mostly due to the creation of functional units that are specifically directed to this pathology[24]. Many European countries, such as Norway, the Netherlands, Germany, Sweden, France, Denmark and Spain, have been working to define new quality standards to establish minimum required values for the surgical treatment of RC[22,24,26,28-32].

The requirement for the creation of coloproctology functional units is based on many studies that demonstrate that the treatment of patients with specific diagnoses, such as RC, is better in hospitals that receive a lot of cases of this pathology; and although it might sound true, this may be more related to specific characteristics of the surgeon than to the number of cases in the hospital[33,34]. In Europe, it is acknowledged that the surgeon factor, especially the technique, the ability and the practice, are essential and influence the results of the treatment for RC[35]. Thus, the sub specialization of colorectal surgeons who are especially trained and have performed a high number of surgeries, is one of the most important predictors of quality concerning colorectal surgery[33,34]. In 2006, Rogers et al. suggested at least 13 rectal resections per surgeon as the minimum value required for maintaining the certificate in colorectal surgery for a period of 4 years, and in hospitals that have at least 84 surgeries of this type during this period[34]. In Sweden, as in this study, Martling et al. observed that the high number of surgeries is associated with better results, and defined that a group reaches such classification when each surgeon performs at least 12 rectal resections in a year[36].

In Portugal, there are many coloproctology functional units; however, there are few studies that evaluate quality standards. So, this study aims to audit the quality of the health care service that is present at the functional units of *Hospital de Braga* in order to provide a work base that allows its improvement.

After analyzing the data concerning the functional units of *Hospital de Braga*, from January 1st, 2007, to June 30, 2010, 164 patients with RC were treated, and since the unit had three surgeons, these values are clearly above the suggested by the two aforementioned studies[34,36] for the performance of RC surgery, so to offer quality standards to these patients.

Concerning the treated patients, it was observed that males are more affected, in 57% of the cases, and that 92.4% of the cases are comprised in age groups older than 50 years, which is in accordance with literature[1,3,37]. As to the location of the RC, our studied showed that 53% of the cases were in the medium rectum, which is similar to findings from studies conducted in Germany, Spain and the United States of America, in which 40 to 55% of the cancers had this anatomical location[22,25,38].

The administration of primary therapy is currently essential to approach locally advanced RC or with ganglion invasion, since it increases the possibility of resection, decreases the locoregional recurrence rate and increases survival rates[23]. In this study, after staging, 27.5% (n=41) of the patients underwent primary therapy followed by surgery.

Concerning the performed surgeries, 93.3% (n=139) of the cases had curative intent, which is higher than the values found in literature, that shows values such as 91.5% in Norway[28], 83% in Sweden[39] and 64% in the Netherlands[40]. This result can be due to the fact that we are located in a region with high incidence of colorectal cancer; this is why patients have been tracked for the past few years, which enabled the early diagnosis, as well as the relation between the functional unit and the health centers; this way, patients were rapidly referred.

The most common surgery in the coloproctology functional unit was the low anterior rectal resection (30.2%), which is in accordance with rates found in literature, of 39.5%[38] and 47.3%[23].

As to the parameter "sphincter sparing surgery", in Sweden and Spain the recommended values are higher than 70%[24,39] of the performed surgery; in Norway and the Netherlands, the ideal value is between 65 and 70%[28,40]. The result was 65.8%, which is close to the minimum value required in these studies. This value can be explained because the ultralow anterior rectal resection is not performed with coloanal anastomosis, and also because of the high percentage of cases in comparison to other series of performed Hartmann's operation, 12.1% (n=18). Out of these patients, only one was submitted to urgent surgery; the others underwent elective surgery, in which the "sphincter sparing" resection could be performed, but due to the old age of the patients (mode of 80 years), with comorbidities associated with sphincter malfunctions, it

was chosen to perform a definitive stoma in order to avoid the high risk of fecal incontinence.

The rate of abominoperineal resections performed was 22.1% (n=33), which is within the limits described in literature, from 22 and 27%[41], strongly influenced by the number of patients in the center. For tumors that are under the 8 cm from the anal margin, the described values range from 44.6 to 44.8%[41].

This rate has been considered as one of the reliability criteria of the functional units[41-43]; however, such criteria are being discussed[41,42], since they depend on the percentage of RC located in the inferior 1/3 of the rectum that each unit presents; in this study, it was 27.5% of the cases.

Concerning the postoperative morbidity analysis, we chose to only characterize the anastomotic dehiscence since it is the main cause of morbimortality of rectal resection[35]. Values of 15%[24] are described in Spanish studies, but other countries presented inferior numbers: 9% in Sweden[39], 10% in Germany, 10% in Norway[28], and 12% in the Netherlands[40]. The first issue we face to compare values concerning the coloproctology functional units at *Hospital de Braga* with data presented in literature is the definition of this concept. Except for the German study, none of the others define "anastomotic dehiscence". This problem is registered in literature, since there are many studies related to dehiscence values; a review conducted by Bruce et al. on the incidence of anastomotic dehiscence post colorectal surgery analyzed 97 studies, in which 57 different definitions of anastomotic dehiscence were defined by the need of surgical reintervention, clinical findings or radiological criteria, thus making the comparison between studies more difficult[44].

In this study, the anastomotic dehiscence was defined as colorectal anastomotic failure, diagnosed by clinical or radiological criteria, with or without the need for the surgical treatment, which represents a total dehiscence rate of 14.8% (n=22); this value would decrease to 6% (n=9) in case only the patients who needed surgical reintervention were considered. When we analyze which "Type of surgery" presents the higher total dehiscence rate, we observe that the low anterior rectal resection is the highest, in 6.8% of the cases, which is in accordance with literature, since the risk of dehiscence depends on the level of anastomosis, among other factors, that is, bigger in the medium and inferior rectum[45].

Another important aspect in the data analysis is that the low anterior rectal resection with ileostomy presents the lowest total dehiscence value, 2%, and also that all the other cases (n=3) were treated without the new surgical intervention.

Even though the primary therapy increases the risk of dehiscence, this study did not have enough data to establish such a relation[45].

Data obtained after the analysis of the evolution of the variable "anastomotic dehiscence" throughout the studied years are inconclusive. Annual values are very similar, however, a gradual increase in dehiscence cases that needed surgical reintervention was observed. This can be a result of lower anastomoses that are performed with the years, due to the accumulated experience, thus causing a higher risk of dehiscence. The lowest dehiscence value was observed in 2010, concerning the first six months of the year; although, there is a tendency to reduce such number.

As to the postoperative mortality rate, according to countries like Sweden, Norway, the Netherlands and Spain, it should be around 2 and 3%[24,28,39,40]; however, this interval is not a consensus, and in Germany the recommendation is that it should be inferior to 5%[22]. In our study, the postoperative mortality rate was 4.0% (n=6) and, as described in literature, this rate is directly related to the anastomotic dehiscence rate, once it is the main cause of death at the postoperative for the colorectal patient[24]. Out of these six patients, three had anastomotic dehiscence, and one underwent a new surgery. Besides, other aspects are also important, especially the old age of most patients in the sample, which leads to low resistance to the intercurrences that occur during admission, as well as associated comorbidities[25]; thus, it was the cause of death for other 3 patients (respiratory failure, myocardial infarction and pulmonary edema).

The evaluation of the ganglia involvement is essential for the staging of the RC, and significant correlations have been established between the number of analyzed ganglia and the survival of patients[46]. In order to study the number of analyzed ganglia, the cohort value was established based on criteria of different surgeon associations, which recommend the analysis of at least 12 negative ganglia[41,46,47]. This way, it is possible to confirm with 90% accuracy that the patient is free of lymphatic invasion[38,48]. In one of the studies conduct-

ed in Germany, it was defined that more than 75% of the surgeries should have more than 12 analyzed ganglia; in Spain, the value presented for such indicator is around 71%[22,38]. In this context, the percentage of cases in which 12 or more ganglia were analyzed (36.6%) is lower than the minimum required value. Three types of factors can contribute with this value: the ones that depend on anatomy and on the biological conditions of the patient; the ones that depend on surgical technique; and the ones that depend anatomopathological technique[48].

Concerning the factors that depend on the patient, the anatomical factors stand out, with individual variations related to the number of lymphatic ganglia, the age of the patient, with the tendency to perform surgeries that are less aggressive in oncological terms, with the old age of the patients48 and the administration of the primary treatment, which causes the ganglia to decrease in size, thus making resection harder[46].

Concerning this last aspect in the analyzed study, 70% of the cases that were submitted to primary therapy presented a number of analyzed ganglia inferior to 12; however, they represent only 34.1% of the cases with less than 12 analyzed ganglia, thus, the low percentage cannot be only related to that fact.

As to the surgical technique, the analysis of resection margins that led to the observation that out of the 164 operated patients, only one presented with radial margin invasion; with this, we concluded that a proper total mesorectal excision was performed, and that the lymphatic ganglia that were present in the mesorectum were completely removed; they might or might not have been accounted for. In literature, abominoperineal resection is described as the surgery with the lowest number of ganglia[48]. Since this surgery ranks in second place in our series as to the most performed surgeries, this might have contributed with the obtained results.

Finally, these results can be justified by the anatomopathological technique, since this unit is still based on the classical model of visual identification and ganglion palpation, which is a slow and delicate process, and also, in 70% of the cases, ganglia have less than 5 mm in diameter and could easily go unnoticed during the resection process[48].

The locoregional recurrence of RC is one of the most feared situations, since it is usually inoperable and the patient could die slowly and painfully[43]. As 55 to 80% of the recurrence cases happen in the first two years after surgery[49], the local recurrence rate in this period is one of the main indicators of the oncological results. The maximum value established for that rate is 10%, and it is presented by the Spanish series[24]; however, in decreasing order, we found the following values: 9% in the Netherlands[40], 6% in Sweden[28,39], and 4% in Norway[28]. In these three countries, this limit is lower for patients submitted to the primary treatment, and the minimum required value is between 1.5% and 2.4%[28,39,40]. In this area, the studied unit presents good numbers, with a local recurrence rate of 6.8%, subdivided into 6.1% of recurrence without primary treatment and 0.7% with primary treatment.

CONCLUSION

The periodic evaluation of quality standards concerning the surgery of RC is important in any coloproctology functional unit, since it enables internal monitoring, identifies the key points as to how to intervene for better results, and yet, at the same time, it enables to inform the patients in the unit about the expected results at the institution, instead of those in literature.

In this study, quality standards were classified as: general, specific and those that study oncological results. Concerning general criteria, the postoperative mortality rate, 4%, and the global dehiscence rate, 14.8%, are within the values recommended in literature. In the category of specific criteria, the rate of sphincter sparing surgeries, 65.8%, was higher than the recommended limit; however, the rate concerning more than 12 resected ganglia, 36.6%, is lower than recommended. Finally, the analysis of oncological results was conducted by a local recurrence rate, 6.7%, and survival rate after two years, 91.1%, both within recommended values.

With this study, we can observe that the values in this unit are within the values recommended in literature for most of the quality criteria. The exception, and one of the items that should receive short term investments, is the improvement of the anatomopathological characterization of the number of assessed ganglia. However, it is important to emphasize that with the rapid therapeutic advances, it is necessary to discuss and regularly rethink the minimum required values, as well as to define a limit of standards that are easy to calculate, so that the evaluation of the results by each of the surgeons in the unit can be a simple and periodic process.

RESUMO: Introdução: O câncer do reto (CR) constitui cerca de 1/3 da totalidade dos casos de câncer colorretal diagnosticados. Após a criação de unidades especializadas no tratamento do CR, tornou-se fundamental estabelecer critérios que permitam avaliar a qualidade do tratamento prestado. Objetivo: Avaliar, segundo parâmetros de qualidade, o tratamento cirúrgico prestado aos doentes com CR, na Unidade Funcional de Coloproctologia (UFC) do Hospital de Braga (HB). Métodos: Realizou-se um estudo observacional, transversal e descritivo com uma amostra de conveniência constituída por 149 doentes operados de CR entre 1º de Janeiro de 2007 e 30 de Junho de 2010. Resultados: Observou-se que a taxa de mortalidade pós-operatória (4%) e a taxa global de deiscência (14,8%) se encontram dentro dos valores recomendados. A taxa de realização de cirurgia poupadora de esfíncteres (65,8%) foi superior ao limite mínimo aconselhado; no entanto, a taxa de número de gânglios ressecados superior a 12 (36,6%), encontra-se aquém do exigível. Os resultados oncológicos foram analisados através da taxa de recidiva local, 6,7%, e da taxa de sobrevida aos 2 anos, 91,1%, ambos dentro dos valores propostos na literatura. Conclusão: Concluímos que o tratamento cirúrgico prestado na UFC do HB apresenta um nível de qualidade semelhante ao globalmente recomendado.

Palavras-chave: câncer do reto; unidade funcional coloproctologia; parâmetros de qualidade do tratamento cirúrgico.

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