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Review Article

Quality of life in adult patients with post-surgical oncological problems to an abdominoperineal resection

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ABSTRACT

Abdominoperineal Resection is a method which has been used as the gold standard for the curative treatment of distal rectal cancer. Because it is classified as a radical and invasive surgery, we have considered the importance of assessing the long-term quality of life in patients which is its best alternative, in turn the degree of psychological impact for which patients could study. Among the factors that could contribute to the performance of the procedure are: that they are in a high-advanced stage, male sex, narrow pelvis, advanced age, and the alteration of the function of the preoperative sphincter to avoid postoperative incontinence. It is important to mention that unfortunately some of these risk factors are independent of a mto the post-surgical oncological prognosis. Incontinence, genitourinary function, pain,dysfunction xual, unpleasant odor and leaks, selflimitations in social activities and even repercussions on body image, reaching depressive symptoms and varying levels of anxiety, andthese complications are what we focus on because it represents aserious problem in the quality of life of the patient undergoing abdominoperineal resection.

Keywords: Abdominoperineal resection, Surgery, Quality

INTRODUCTION

After lung cancer, colon cancer is the second leading cause of cancer death in the United States; in 2010 there were 142,570 new cases and 51,370 deaths were due to ectalcolor cancer. The frequency has decreased considerably over the past 20 years, perhaps thanks to improved screening. Mortality in the United States was also reduced by 25 percent, largely because treatments are better and detection is more-timely.

Total removal of the tumor is the optimal treatment when a malignant lesion is detected in the large intestine. Extensive assessment for metastases should be performed prior to surgery, and the presence of metastases should not prevent surgical treatment in patients with tumor-related symptoms such as bleeding or obstruction of the digestive system. In laparotomy, the entire peritoneal cavity should be examined. After the recovery period after a total removal, it is important to monitor the patient for five years with physical examinations every six months and annual biochemical analyses. If a complete colonoscopy was not done before surgery, it should be performed in the first months of the postoperative period. Some specialists recommend measuring the plasma concentration of CEA every three months by the sensitivity of this test as an indicator of tumor recurrence undetectable by other procedures.

Pelvic radiation therapy is generally recommended for patients with rectal cancer since the probability of regional recurrence is 20 to 25% after complete resection of stage II or III tumors. This high percentage of local recurrence is attributed to the fact that the extent of resection is limited by the anatomy of the pelvis and because in the lateral wall of the pelvis, immediately on one side of the rectum, there is a rich lymphatic network. Combining postoperative radiation therapy with 5-fluorouracil-based chemotherapy reduces local recurrences and improves overall survival. Preoperative radiation therapy is indicated in patients with large rectal cancer that cannot be removed, as this type of fixed anatomical lesion may be reduced sufficiently in size to allow for further surgical removal.

cancers account for 1 to 2% of malignant tumors of the large intestine. Most of these lesions originate in the anal canal, which is defined as the anatomical zone between the anorectal ring and the region located in the middle between the pectineal line and the anal border. Carcinomas that originate in the area proximal to the pectineal line are called cloacogenic, cuboid, or basaloid tumors. Malignant tumors that originate in the area distal to the pectineal line are, in histological terms, epidermoid tumors, ulcerate more frequently and constitute about 55% of malignant neoplasms of the anus.

Anal cancer is linked to the human papillomavirus. The infection causes anal warts that degenerate into anal intraepithelial neoplasia and squamous cell carcinoma. It is usually manifested by hemorrhages, pain, lumping sensation or perianal itching.

Until recently the preferred treatment of this type of tumor was radical surgery (abdominoperineal removal with nodal cleansing and permanent colostomy). With this treatment, five-year survival was, in the absence of nodal lesions, 55 to 70% and, in the presence of these lesions, less than 20%. However, the therapeutic alternative that combines external radiotherapy with simultaneous chemotherapy has managed, as has been proven with biopsy, to eliminate the tumor by more than 80%.

Recurrence is undoubtedly the main evolutionary complication of surgery in rectal cancer. This is clearly related to a poor cancer prognosis and poor quality of survival. Recurrence is usually conditioned by insufficient lateral dissection at the level of the pelvic and perineal rectum. This aspect was clearly enhanced by two transcendent facts. On the one hand, the introduction by Heald of the concept of total rectal mesor resection (TMR), and on the other, by the introduction of neoadjuvant and/or adjuvant complementary treatment in cases of advanced cancer.

Abdominoperineal resection or surgery against colon cancer is used to remove the lower section of the colon and rectum. It also creates a colostomy so that stool can be expelled from the body. There are many different ways to do an abdominoperineal resection.

The assisted laparoscopic technique consists of laparoscopic dissection and skeletonization of the affected segment and then by means of a mini-laparotomy of the umbilical region perform externalization, resection and anastomosis in the right hemicolectomy; or in the left iliac fossa for anterior resection, performing extracorporeal resection, and colorectal anastomosis in intracorporeal form; also for abdominal time in abdominoperineal amputation, the incision is placed in the left iliac fossa, then performing perineal time in a conventional way.

Defining these neoplasms, their surgical treatments, adjuvant treatments and complications in this study the main objective is to verify the quality of life in post-oncology patients operated both by peri abdominal resection and laparoscopy among other surgeries.

THEORETICAL FRAMEWORK

Receiving a cancer diagnosis carries a great emotional impact and is a break with the usual way of life. Overnight and in many cases without warning, we are forced to change habits and customs, to give up projects and to face numerous threatening and unknown situations. Sometimes treatments are brief and effective and life quickly returns to normal. Other times, however, longer interventions such as surgeries are required, with relapses and the process becomes longer and more complicated, which is why we searched for articles to compare the quality of life in patients with colorectal cancer undergoing surgeries.[1]

Colorectal cancer is the third most common malignancy; In 2010, colorectal cancer accounted for 9.4% of new cancers worldwide, with 945,000 cases diagnosed, and 7.9% of deaths worldwide. The incidence of colorectal cancer in the United States is 34 cases per 100,000 population, with a total number of 74,000 new cases annually. In Colombia it is the sixth cause of cancer for both sexes: there are 10 cases per 100,000 inhabitants, 4,000 new cases were registered for the year 2010, with a mortality of 7%, and it occupies the sixth position in terms of mortality.

The basis of treatment for patients with this neoplasm is abdominoperineal resection (APR), this was constituted as a gold standard to treat this neoplasm.[2]

Initially, Miles' operation was indicated in rectal tumors of any height; however, with the development of new techniques new oncological results were observed comparing the previous resection with the APR, they have modified this situation until today in which this technique is reserved for tumors located in the lower rectal third and, exceptionally, for tumors of the middle third, it is also indicated in cancers that have appeared

after treatment with chemo and radiotherapy. Operations with preservation of sphincters and the use of mechanical sutures have diminished the indications of the operation of Miles in favor of the latter.

Since 1908, Ernest Miles

He mentioned that abdominoperineal resection was a technique for treating rectal cancers but that there was still much to investigate about their future complications.

One of the main characteristics of this surgery is that it leaves a definitive colostomy and that the postoperative period has low mortality and high morbidity, which sometimes forces prolonged hospitalizations and important sequelae that affect the quality of life of patients. Colostomy is the mouthing of the colon to the skin, in a place other than the anus, to give out totally or partially the colonic content. This can be temporary or definitive, terminal or lateral, and the latter matured or not, depending on its indication and the particular conditions of each patient.[3]

Amine Souadka conducted a study from 1993 to 2007 in 380 cancer patients, in which the satisfaction rate of Schmidt's continent perineal colostomy (PCPC) was evaluated in these patients who had undergone abdominoperineal resection (APR) for the management of low rectal adenocarcinoma; this study was determined by asking patients their satisfaction on a scale of 0 to 10 (0-3 dissatisfied; moderately satisfied 4-7; satisfied 8-10). Resulting in a satisfaction rate of 111 (77%) patients were very satisfied with this technique and 33 (22.4%) were moderately satisfied.

In conclusion, Schmidt's continent perineal colostomy (PCPC) is a simple, safe and reliable pelvic reconstruction technique after abdominoperineal resection of inferior rectus adenocarcinoma. It provides a high degree of patient satisfaction without compromising cancer outcomes.[4]

Over the past 25 years, the history of rectal cancer has changed as treatment has shifted from surgical to a multidisciplinary model. Proper staging plays a critical role in the decision-making process in patients with rectal cancer. The four most common modalities of imaging studies in the preoperative phase include endoscopic ultrasonography, computed tomography, magnetic resonance imaging, and positron emission tomography. Local and regional control of rectal cancer has improved over the past 15 years, following the introduction of total mesorectum excision, leading to complete removal of the intact mesorectum, including lymph nodes, nerves, and vascular irrigation. Due to better local control, adequate preservation of sphincters and reduced toxicity, patients requiring combination treatments should currently receive radio and concomitant presurgical chemotherapy.

The goal of rectal cancer treatment is to cure the disease and also preserve rectal function and quality of life. Total resection of the mesorect, which means the removal of the rectum and its mesorectal envelope, is the standard treatment for rectal cancer. Patients with tumors located in the upper or middle third are usually given an anterior resection or a low anterior resection, preserving the anal sphincter. In contrast, those with distal tumors require a full APR resulting in permanent colostomy. When the disease is early (stage I) and aggressive surgical treatments are used, survival rates are high and range around five years in 87 to 90% of cases. Total excision of the mesorectum is a major operation accompanied by significant mortality (1 to 6%) and considerable morbidity.[5]

In articles ranging from 2013-2017, on which we focus, it has been seen that abdominoperineal resection (APR) is considered as the standard of care for the curative treatment of distal rectal cancer. It has also been associated with impaired cancer outcomes and survival; it has even been performed for distal rectal cancer with coloanal anastomosis (AAC). Since it has been observed that decision-making for the preservation of the sphincter versus the resection of the sphincter is related to numerous tumors and an adverse result that is due to the combination of these factors or with the surgical procedure.

Other factors that could lead to performing an APR and not a sphincter preservation procedure are stages T, male sex, narrow pelvis, increased age and impaired function of the preoperative sphincter to avoid postoperative incontinence.[6]

In addition, patients undergoing APR had an increased risk of overall mortality of 58% and a 61% increased risk of specific mortality. Overall, 5-year survival for patients was 65.6% compared to 76.7% of patients undergoing AAC. Cancer-specific survival at 5 years for patients with APR was 74.3% compared to 83.3% in patients undergoing AAC.

Also in this study, the impact of complications after colorectal surgery on anxiety, depressive symptoms, and health status was evaluated. Previously, very few studies examined the psychological impact of complications after colorectal surgery. Complications in surgery are now known to be a major cause of morbidity and mortality. In addition, it is important to add that in clinical practice, little attention is paid to the psychological impact of complications.

Since they can result in an extension in the time of the hospital stay, repeated surgery or additional medical treatment, increased costs and legal issues. In addition, complications after colorectal surgery are associated with reduced long-term quality of life.[7]

Complications that are deviations from the postoperative normal course and do not need any treatment are Stage I, stage II requires pharmacological treatment, stage IIIa is when additional diagnostic or therapeutic procedures are necessary, stage IIIb are performed under local anesthesia or under general anesthesia, stage IV are life-threatening complications that require ICU management and stage V is death. This classification system is currently used around the world.

So, it can be known that colorectal surgery has a profound effect on depressive and anxiety symptoms, as well as almost all domains of health status. At 6 weeks, these effects are most noticeable, but at 1 year, they have faded.

Although it was also shown that patients with rectal cancer who underwent laparoscopy showed better postoperative recovery without jeopardizing a margin of clear circumferential resection, nodal performance and surgical complications.[8]

Martinović conducted a study from January 2002 to December 2006 at the Clinic of the Hospital Centre Rijeka, in Croatia, including 95 stage II primary rectal adenocarcinomas treated with complete surgical resection (R0). Stage II CR is defined by the presence of penetration through the proper muscle layer and the absence of metastases to regional lymph nodes to distant sites. It has been shown that this tumor depends extensively on its angiogenesis capacity, for this reason in this study endoglin (CD105) was used since it is the most appropriate marker available to quantify tumor angiogenesis.

Of the 95 patients, 16 patients developed tumor recurrence (recurrence rate, 16.8%) and 29 died of CR (overall survival rate, 30.5%) In the 5-year follow-up period 5-year recurrence rate for all patients in this study was 16.8%. The key to successful surgery is the complete removal of the tumor with sufficient margin of normal tissue.[9]

Wang conducted a systematic review using several databases to compare the treatment of low rectal cancer using abdominoperineal resection and low anterior resection; resulting in Abdominoperineal resection having more complications and greater recurrence. Circumferential resection margin (CRM) involvement was also shown to be a strong prognostic indicator for local recurrence.

In that same year Asplund found that 3 years after APR patients had perineal symptoms for rectal cancer, in which possible risk factors and complications of perineal wound were identified.[10]

Such as pain, inability to sit, paresthesia, tension between buttocks, tingling/stinging sensation between the buttocks, perineal cramps/feeling of urgency. And perineal symptoms were present in 50%, most often in women. 24% experienced one or more symptoms such as tingling sensation between the buttocks, sitting disability, cramps/urgency. Perineal pain was the most frequent symptom among patients, the inability to sit was particularly distressing for patients.[11]

And in 2016 it was seen that well-being and body image is truly an important factor in patients who had an APR for rectal cancer 3 years later. APR has been found to have some stoma-related problems, such as parastomal hernia, pain, sexual dysfunction, other diseases, unpleasant odor, and leaks, which made them feel uncomfortable. In addition, bodily limitations are mainly associated with clothing and social and leisure activities, especially swimming. But what most influences the quality of life of each patient is body image, as it is of importance in relation to depression and anxiety after treatment for rectal cancer. Because it is associated that a stoma is of a bad body image. As in some cases most improved over time and others did not.

Although it can be said with satisfaction that more than 80% of patients expressed in their own words that they experienced well-being and acceptance of their situation, because stoma and symptoms were the only concern. But it is worrying to find that 18% of patients did not accept their current situation 3 years after curative treatment for rectal cancer.[12]

It has been seen that before surgery, patients undergoing abdominoperineal resection score lower in terms of overall quality of life. The location of the tumor plays a key role. Patients qualified for abdominoperineal resection are characterized by low tumor localization in the rectum, which can lead to specific symptoms.

Unresected primary tumors can lead to complications such as filling, perforation or bleeding, it has been linked when emergency surgery to a high morbidity and mortality. The risk of local complications related to a tumor left in situ during chemotherapy ranged from 8.5% to 30% and the highest risk was of obstruction (6-29%).[13]

DISCUSSION

Colorectal cancer is the third most frequent neoplasm, over time, different surgical techniques have been created as a treatment for this pathology.[1] It has been shown that these techniques must not only solve much of the problem, but must also present low levels of complication and provide the patient with an acceptable quality of life after the procedure performed.

In a study conducted by Wang, the alt in 2014, evaluated survival five years after the operation, the statistical data that were obtained showed a favorable five-year survival in the LAR group. It was observed that the margin of circumferential resection (CRM) was high in the APR group than in the LAR group and that post-procedure

complications were higher in those in whom LAR was performed, such complications included bleeding, ureter injury, bladder injury and anastomotic rupture.[10]

A study conducted by Wang, the alt in 2015 showed that intraoperative blood loss and operating time was greater in the laparoscopic abdominoperineal resection (LAPR) group compared to the OAPR group. And that those who underwent the laparoscopy procedure showed better postoperative recovery without jeopardizing a clear circumferential resection margin, nodal performance, and surgical complications.[10]

In a study conducted in 2016 by Martinović the alt, they showed that there was a high risk of recurrence, since 25% of these patients will relapse within 5 years, the risk of relapse can be estimated by evaluating the histopathological characteristics of the cancer, tumor growth and its spread to adjacent tissue which depends on its ability to stimulate angiogenesis.[9]

Monastyrska the alt in 2016 showed that the most severe symptoms were present in the APR group, this group of patients presented nausea, vomiting, constipation and diarrhea, while the highest intensity of pain was observed 6 months after surgery in the LAR group. In the APR group, significant differences in outcomes were observed before and during the 6 months after surgery. The patients who underwent the aforementioned procedure reported that they presented an increase in the frequency of urination, blood and mucous membranes in the feces, frequency of defecation, dysuria, abdominal pain, lumbago, flatulence, xerostomia, alopecia, uncontrolled release of gases, fecal incontinence. In both the LAR and APR groups, unwanted symptoms of the disease decreased 6 months after surgery and the results showed specific benefits in quality of life in patients who had undergone LAR.[1]

In another study conducted by González, the alt. In 2016 they found that the quality of life of patients was affected in different areas in those in which they had an APR. These patients presented symptoms such as pain, sexual dysfunction, other diseases, unpleasant odor, and leaks, which made them feel uncomfortable. In addition, bodily limitations are mainly associated with clothing and social and leisure activities, especially swimming. But what most influences the quality of life of each patient is body image, as it is of importance in relation to depression and anxiety after treatment for rectal cancer.[12]

CONCLUSION

Therefore, we conclude that there is a decrease in the quality of life of patients with abdominoperineal resection, which can lead patients to a condition of post-surgical physical and mental discomfort. Therefore, we consider of vital importance the collaboration of a psychological treatment as an integral part of the medical and surgical treatment to avoid the degrees of anxiety and depressive symptoms that were already mentioned above.

Recommendations

The help provided by modern detection techniques in the fight against cancer today is exceptional. First of all, it is considered that colonoscopy will allow us to make an early diagnosis and treatment, which is essential to achieve high survival figures. Using this device, the main factor where a colo rectal cancer can develop is eradicated. Patients with risk factors should be closely followed up by colonoscopy annually or every three years.

Another point that is important to consider is the control over environmental factors and how it includes, for example the elimination of carcinogenic products in the workplace and at home. Dietary control also reduces the incidence: reducing caloric intake to avoid obesity, reducing calories from fat to 20% of the diet, reducing the consumption of red meat, increasing fiber intake (cereals, fruits and vegetables) and protective foods (containing vitamins C and A). The consumption of smoked, salted or nitrite-rich foods should be limited, as well as the consumption of alcohol. Rectal cancer has seen a significant increase in recent years.

However, it is known that surgery: It is the main method practiced for the curative treatment of cancer for the correct elimination of all malignant cells through surgical intervention.

Rectal cancer surgery is an operation of great complexity and that no one is exempt from presenting any complication.

It is known thatrectal cancer has presented a significant increase in its incidence in our country in recent years. It follows that rectal cancershould be approached as a public health problem in our country. Being rectal cancer more aggressive than colon cancer, evolving with local recurrence in up to 15%.

The treatment of choice is radical resection of the affected segment. The therapy has two fundamental objectives: Firstly, the eradication of neoplastic disease, and secondly, to achieve a good quality of life. In this last sense, tumors of the rectum of the lower third constitute an additional challenge for the surgeon, since they expose him to achieve the preservation of the sphincteric apparatus.

And it is very important to consider that the patient is undergoing a neoplastic process, in addition an invasive procedure will be performed, after him, whether permanently or temporarily due to a decrease in the quality of life, due to the friction. Which after the procedure will have repercussions on the patient's life leaving physical discomfort that can have an impact on

their psychological situation. They can last even up to 32 months after surgical treatment. This gives us as a consequence a physical limitation to perform social activities of interest to the patient, and adds to this a coadjuvant therapy (chemotherapy, radioterapia). The patient will be in a low mood.

Leaving aside that physical and psychological discomfort are also spoken of a risk of mortality to undergo the surgical procedure of approximately59% which is a high value to reconsider the need for surgery.

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