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KEY WORDS: rectal cancer, abdominoperineal amputation, adenocarcinoma.

RECTAL CANCER SURGERY: OUR EXPERIENCE ON FORTY OPERATED PATIENTS IN A REFERRAL HOSPITAL OF CAMEROON

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ABSTRACT

Objective: To share our experience of forty operated patients with rectal cancer at Yaounde Central Hospital

Methods: We conducted a retrospective study over a period of four years, from January 2010 to December 2014 in the surgical emergency department and visceral surgery department of the Yaounde Central Hospital. The variables studied were sociodemographic, clinical, and therapeutic variables.

Results: There was a predominance of men or 55% with a sex ratio of 1.2. The modal class of age was between 40 and 60 years, whether 52.5% (n = 21) of patients, and 25% (n = 10) of patients were less than 40 years. In 52.5% (n = 21) of patients, the tumor was localized between 1 cm and 3 cm from the anal margin (lower third). In 47.5% (n = 19) of the patients, rectal cancer was at stage 2 and 45% (n = 18) at stage III according to the TNM classification. The surgical technique used was abdominoperineal amputation in 72.5% (n = 29) and anterior resection in 27.5% (n = 11) of patients. Histological analysis of the tumor revealed a lieberkhunian adenocarcinoma in 52.5% (n = 21) of cases, mucinous adenocarcinoma in 30% (n = 12), and lymphoma in 2.5% (n = 1) of cases. The outcome was without any complication in 60% of cases. Post-operative complications were infections in 17.5% (n = 7) of cases and digestive fistula in 10% (n = 4) of cases. We recorded 22.5% (n = 9) of deaths during the first post-operative month.

Conclusion: In our context, the diagnosis of rectal cancer is still made after several months of evolution; this makes it difficult to manage and increases post-operative morbidity and mortality.

INTRODUCTION

Rectal cancers are malignant proliferative neoformations developed at the expense of the constituents of the rectum [1]. These are frequent digestive cancers, whose diagnosis is possible by digital rectal examination; however, rectoscopy with biopsies is the key examination of the diagnosis. Treatment is based on surgery, radiotherapy and chemotherapy [2].

In France, the incidence of rectal cancer is 15,000 new cases per year. The probability of survival at 5 years is about 55% (Bossard N, 2007). In Africa, its incidence which was very low fifty years ago, has increased in the last two decades [3] with a high proportion of young people [4]. Indeed, in Cameroon they account for 32% of the digestive cancers [4].

Surgery occupies a preponderant place in the treatment of rectal cancer, and, the quality of surgical resection is a major prognostic factor (proximal, distal, lateral margin, proximal lymph node dissection with the minimal number of ganglia cleaned out, extrafascial exaeresis of mesorectum) [1, 3, 5].

The Yaounde Central Hospital being a hospital-university reference institution dedicated to medical training, it is necessary to carry out assessments of clinical practices, based on the results. Therefore, we proposed to focus this study around rectal cancer, in order to assess the results of its surgical management at Yaounde Central Hospital.

METHOD

We conducted a retrospective study over a period of four years, from January 2010 to December 2014 in the surgical emergency department and visceral surgery of the Yaounde Central Hospital. We included all records of patients operated for rectal cancer, and we subsequently excluded incomplete records. All patients whose records met the inclusion criteria during the study period were recruited. The data needed for the study were recorded on a data sheet. Statistical analysis was performed using the SPSS (Statistical Package for Social Sciences) software version 20.0 and the variables studied were sociodemographic, clinical and therapeutic variables.

RESULTS

During the study, we retained 40 medical records of patients who met our inclusion criteria. There was a predominance of men or 55% with a sex ratio of 1.2

The modal class of age ranged from 40 to 60 years, whether 52.5% (n = 21) of patients. 25% (n = 10) of patients were less than 40 years, and 22.5% (n = 9) of patients were over 60 years old.

Rectal cancer was expressed by a rectal syndrome in 57.5% (n = 23) of patients, gastrointestinal bleeding in 27.5% (n = 11) of patients, and occlusive syndrome in 15% (n = 9) of patients.

80% (n = 32) of patients had no relevant past history. 10% (n = 4) had a history of digestive tumor, 5% (n = 2) had a history of polyps and 5% (n = 2) had a history of chronic inflammatory bowel disease.

47.5% (n = 19) of the patients consulted after 6 to 12 months evolution of the initial symptoms.

In 52.5% (n = 21) of the patients the tumor was localized between 1cm and 3cm of the anal margin (lower third).

Endoscopy revealed the presence of a rectal mass in 85% (n = 34) of patients.

5% (n = 2) of patients already had pulmonary metastasis at the time of diagnosis.

Abdominal CT showed mesenteric lymphadenopathies in 62.5% (n = 25) of patients, ascites in 12.5% (n = 5) of patients, and peritoneal carcinomatosis in 7.5% (n = 3) of patients (Figure 1).

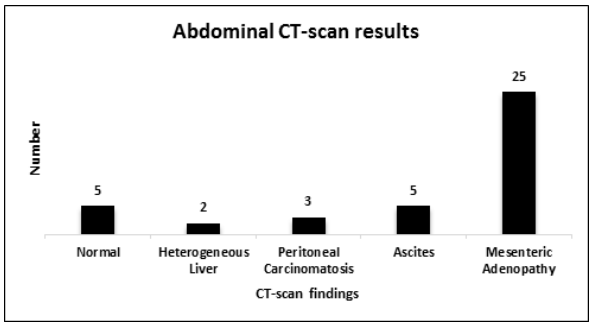

Figure 1: Distribution of patients according to the results of abdominal computed tomography

In 47.5% (n = 19) of the patients, rectal cancer was at stage II and 45% (n = 18) in stage III according to the TNM classification.

The surgical operating technique performed was abdominoperineal amputation in 72.5% (n = 29) and anterior resection in 27.5% (n = 11) of patients. We established a definitive stoma in 80% (n = 32) of the patients. Mesorectum resection was complete in 50% (n = 20) of the cases.

Histological analysis of the tumor revealed a lieberkhunian adenocarcinoma in 52.5% (n = 21) of cases, mucinous adenocarcinoma in 30% (n = 12), and lymphoma in 2.5% (n = 1) of cases (Figure 2).

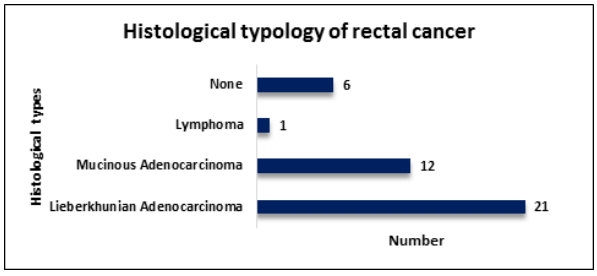

Figure 2: Distribution of patients according to the histological diagnosis of rectal cancer

The outcome was without any complication in 60% of cases.

Post-operative complications were infections in 17.5% (n = 7) of cases and digestive fistula in 10% (n = 4) of cases (Figure 3).

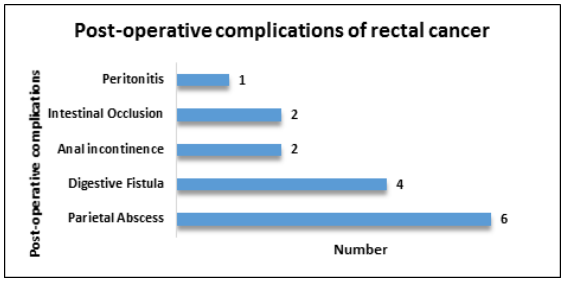

Figure 3: Distribution of patients according to postoperative complications

We recorded 22.5% (n = 9) of deaths during the first post-operative month.

72.5% (n = 29) of patients received adjuvant therapy, and surgical treatment was exclusive in 27.5% (n = 11) of patients (Figure 4).

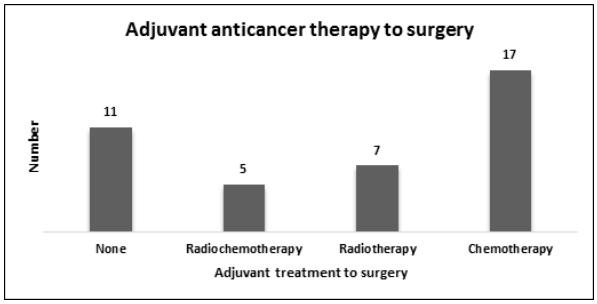

Figure 4: Distribution of patients according to the adjuvant treatment received after surgery

DISCUSSION

In most studies conducted in Africa and Europe, the male sex is dominant. In our sample, it is 55% of men and 45% of women, a similar result to those of **Ngo Nonga and al** in Cameroon in 2011 [3], **Ukwenya and al** in 2013 in Nigeria [6] and **Nghario and al** in 2007 in Central African Republic (CAR) [7], who reported respectively 57% of men versus 43% of women, 54% of men versus 46% of women, and 64% of men versus 36% of women. We can explain it by the fact that in Cameroon the lifestyle of men compared to the women exposes them more to the risk of developing cancer of the rectum (smoking and alcohol).

Rectal cancer affects relatively young subjects. Indeed, in our series, the modal class is between 40 and 60 years and 25% of patients are less than 40 years. These results are comparatively similar to the results of **Ngo Nonga and al** in 2011 results, which found a median age of 51 years [3], **Nghario and al** in 2007, which reported a series of 56 cases in 10 years in CAR with 17.8% of patients under the age of 40 years [7] and **Rahman and al** in 2010 in Nigeria who found 38.9% of patients under 40 years old [8]. We can explain this high proportion of young subjects by the modification of the lifestyle, especially nutrition and also the decrease of life expectancy in our context. These results nevertheless contrast with those of **Takongmo and al** which found in 2000 in a series of 23 cases of rectal cancers a predominance of young people under 40 years old with 56.5% [4], a difference that can be explained by the multicentric profile of their study.

The semiological signs leading to the diagnosis of cancer of the rectum are all related to the digestive system, but are characterized by a variability of the clinical expression. Thus, in our series, 57.5% of patients had a rectal syndrome and 27.5% consulted for gastrointestinal bleeding. **Coulibaly and al** in 2007 in Mali [5] and **Casanelli and al** in 2005 in Ivory Coast [1] found respectively 30% of rectal bleeding versus 26.2% for rectal syndrome, and 43.8% of rectal bleeding versus 37.5% for rectal syndrome. The semiological expressions are concordant and the proportional difference would be related to the difference in our respective sample sizes. Indeed, **Coulibaly and al** study involved 81 patients [5], twice the size of our sample and **Casanelli and al** study involved 16 patients [1].

At the time of the consultation, these symptoms were already evolving since 06 to 12 months in 47.5% of the patients of our study. This finding corroborates that of **Coulibaly and al** who found a median consultation time of 12 months, with extremes ranging from 03 months to 48 months [5]. Indeed, in a context where the vast majority of the population has many difficulties in meeting their basic needs, the question of the affordability of care reveals the main consequence of delayed consultation in hospitals, patients consulting only when the symptoms recur and / or exacerbate over time, becoming disturbing, disabling, and substantially degrading their general condition. This further

explains that cancer is diagnosed only in stages II (47.5%) and III (45%) of progression (TNM classification).

Rectal cancer can develop at the expense of any site in the rectum. Our study reveals that the most common anatomical topography was the lower third (52.5%). This finding is also consistent with that of **Casanelli and al** in Ivory Coast (43.7%) [1] and **Coulibaly and al** in Mali (62.7%) [5].

Only 5% of our patients already had pulmonary metastases at the time of diagnosis, similar to the results of **Casanelli and al** in 2005 in Ivory Coast, which found 6.3% of cases of pulmonary metastases [1]. At the abdominal level, 62.5% of the patients in our series presented with mesenteric lymphadenopathy and 5% had liver metastases. These findings are similar to those of **Hassen and al** in 2007 in Morocco who found 9% of liver metastases [9].
Surgical management of rectal cancer was performed in 72.5% of patients using abdominoperineal amputation as the preferred surgical technique, versus 27.5% for anterior resection. This management is similar to that of Casanelli and al in Ivory Coast [1], **Coulibaly and al** in Mali [5], and **Diallo and al** in Gabon [10] who reported abdominoperineal amputation as the main surgical procedure.

The histological examination of the operative specimen found in 82.5% of cases an adenocarcinoma (lieberkhunian and mucinous). This histological preponderance of rectal cancer is further corroborated by **Ngo Nonga and al** in 2011 who found a proportion of 100% [3], **Casanelli and al** in Ivory Coast who found 94% of adenocarcinoma [1], **Coulibaly and al** in Mali found 77.7% [5] and **Sudarshan and al** in India found 80.2% of adenocarcinoma of the rectum [11].

From the point of view of post-operative complications, there was a post-operative mortality rate of 23% and 15% of abdominal wall infections in the first month. **Ngo Nonga and al** in Cameroon [3], **Rahman and al** in Nigeria [8], and **Coulibaly and al** in Mali [5] reported respectively 0%, 5.9% and 13.6% of deaths in the first post-operative 30 days. In addition, **Ngo Nonga and al** in Cameroon in 2011 [3] and **Ukwenya and al** in Nigeria in 2013 [6] reported respectively 28.6% and 25.3% of parietal infections. Indeed, the late diagnosis of rectal cancer (stages II and III) in our context is proportionally correlated with an increase in the postoperative mortality rate and failure of surgical treatment. The prognosis is all the more pessimistic as the surgery concerns a highly septic medium, favoring the development of postoperative abdominal infections.

CONCLUSION

Contrary to some of the data found in literature which present cancers of the rectum as rare in Africa, our study reveals them as more and more frequent on our continent, with a high prevalence in the young adult subject of less than 40 years. In our context, the diagnosis is still made after several months of evolution; which makes it difficult to manage and increases post-operative mortality. The pathology was diagnosed at stages II and III of its evolution according to the TNM classification, and the majority of our patients benefited from surgical treatment of abdomino perineal amputation with adjuvant anticancer treatment. The outcome was without any complication in 60% of cases and postoperative morbidity and mortality was dominated by wall infections and 22.5% of deaths recorded at one month.

CONFLICT OF INTEREST

None of the authors claim to have a conflict of interest in relation to this article.

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