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Epidemiological, Clinical and Therapeutic Profile of Rectal Adenocarcinomas Treated in the Radiotherapy Department of EHSO Emir Abdelkader

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Abstract: Rectal cancer is classified among the most common cancers in the world, the second most common digestive cancer in Algeria; however its incidence in our country remains lower than that of western countries. The interest of this article is the retrospective analysis of the epidemiological, clinical and therapeutic aspects of malignant tumors of the rectum managed in the department of the EHS oncology Emir Abdelkader in Oran, Algeria. Concomitant preoperative radio chemotherapy is the standard treatment for locally advanced rectal adenocarcinomas; however it can be carried out postoperatively if the initial stage of the disease is underestimated. We conducted a retrospective epidemiological, clinical, anatomopathological, therapeutic and prognosis study at the radiotherapy department of the EHS oncology Emir Abdelkader in Oran over a period of 6 years from January 2017 to December 2019 involving 70 patients taken in charge during this period. This hypo fractionated irradiation regimen at a dose of 39 Gray could be a therapeutic alternative in the preoperative situation for locally advanced rectal tumors with promising results in terms of effectiveness and an acceptable toxicity profile.

Keywords: Cancer, Epidemiological, Anatomopathological, Radiotherapy, Therapeutic.

Introduction

Rectal cancer is a common disease. It reaches nearly 15,000 new people each year, slightly more men (53%) than women (47%). In more than 9 cases out of 10, it occurs after 50 years. Most of the time, rectal cancers develop from a benign tumor (non-cancerous) called an adenomatous polyp or adenoma. These benign tumors are very common and generally remain harmless. But 2 to 3% of them develop, grow and eventually turn into cancer. This transformation is slow, it takes on average more than 10 years. Evidence is accumulating that rectal cancer is distinct from colon cancer with different aetiologies and risk factors (Aleksandrova et al., 2014; Kirkegaard et al., 2010), possibly reflecting different environmental exposures.

High body mass index, body or abdominal fatness and diabetes type II are seen as risk factors. Longstanding ulcerative colitis and Crohn's disease affecting the rectum, excessive consumption of red or processed meat and tobacco as well as moderate/heavy alcohol use increase the risk. A healthy lifestyle and exercise can reduce the risk of developing rectal cancer (Murphy et al., 2012; Valentini et al., 20156). Consumption of garlic, milk, calcium and high dietary fibre are regarded as protective (Clinton et al., 2020). Although regular use of non-steroidal anti-inflammatory drugs (NSAIDs) is associated with reduced incidence, and there may be a protective effect of vitamin D via antitumour immunity, no formal guidelines for pharmacological primary prevention should be advised. Rectal cancer is classified among the most common cancers in the world, the second most common digestive cancer in Algeria; however, its incidence in our country remains higher than that of occidental countries.

The aim of this study is to evaluate the effectiveness and tolerance of preoperative hypo fractionated radiotherapy (associated or not with chemotherapy) in the treatment of locally advanced rectal cancer.

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Materials and Methods

Seventy patients received preoperative hypo fractionated radiotherapy from January 2017 to December 2019; fifty-three (75.7%) received induction chemotherapy followed by chemo radiotherapy, twelve (17.1%) received chemo radiotherapy and five (7.1%) received exclusive radiotherapy irradiation was three –dimensional conformation delivered at the dose of 39gray in 13fractions on the PTV.

Therapeutic

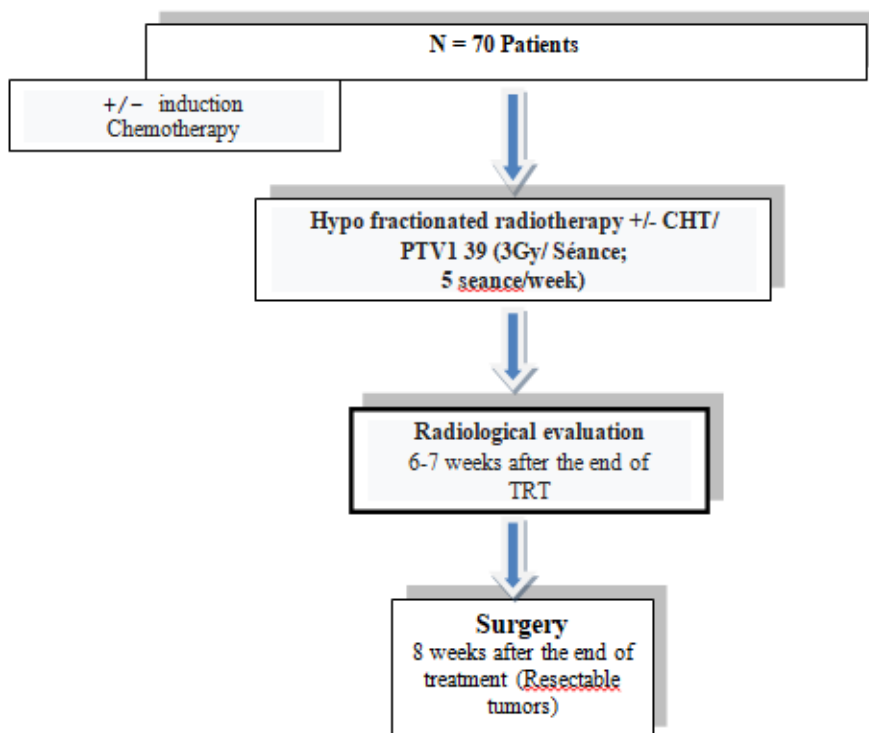


Figure 1. Therapeutic

Results and Discussion

The median age was 58 years (range23-85 years). The histology was dominated by adenocarcinoma with a rate of 98.6%.sixty-two patients (88.6%) were stage III, four (5.7%) stage II and four (5.7%) stage IV according to the American joint commission on cancer (AJCC). Forty-one patients (58.6%) were operated on the histological results of the surgical specimens were in favor of a complete reponse in 17.1% and stages I, II, III in 46.3%, 12.2% and 24.4% respectively with a median follow-up of 27 months (range 6-40 months). During treatment, grade 1 and 2 radio dermatitis according to RTOG was observed in thirty-three patients (47.1%), grade 1 and 2 radiation anitis in twenty-seven (38.6%), digestive complications grade 1 in fifteen patients (21.4%). Lately, digestive discorders were noted in six patients (8.6%), sexual in four (5.7%) and urinary in four patients as well (5.7%). The survival rate without loco regional recurrence at 24 months was 93.1% .the overall survival rate at 24 months was 87.7%.

Median follow-up: **26.3 months**



2 Loco regional relapses
14 Metastatic relapses
19 deaths

Table 1. Patient characteristics.

	n (%)
Total Number of patients (2017-2019)	70 (100)
Age (years): Median	58
Interval	23-85
Sex: Female	25 (35.7)
Male	45 (64.3)
Seat(IRM):	
Down	21 (30)
Medium	7 (10)
Low-medium	20 (28.6)
Medium-high	20 (28.6)
Low-medium-high	2 (2.9)
Stadiums(AJCC2017)	
I	4 (5.7)
III	62 (88.6)
IV	4 (5.7)
Induction chemotherapy:	
Yes	53 (75.5)
No	17 (24.3)
Surgery:	
Yes	41 (58.6)
No	29 (41.4)
Histology of the surgical specimen:	
Stage 0	7 (17.1)
Stage I	19 (46.3)
StageII	5 (12.2)
Stage III	10 (24.4)

Table 2. Acute toxicity observed

Grade 1-2	n (%)
Radiodermatitis	33(47.1)
Anite	27(38.6)
Ileitis	27(38.6)
Cystitis	15(21.4)

Table 3. Late toxicity observed

Grade 1-2	n (%)
Digestive disorders	6 (8.6)
Sexual complications	4 (5.7)
Urinary complications	4(5.7)

Table 4. Survival rate

	Rate at 18 months	Rate at 24 months	Rate at 36 months
Survival without loco regional recurrences	96.7% (+/-0.2%)	93.1% (+/-0.3%)	93.1% (+/-0.3%)
Overall survival	89.8%(+/-0.3)	87.7% (+/-0.4%)	55.7% (+/-0.9%)

Conclusion

This treatment with hypo fractionation at 39gray may be a preoperative therapeutic alternative for locally advanced rectal tumors with promising results in terms of efficacy and an acceptable toxicity profile.

Scientific Ethics Declaration

The author declares that the scientific ethical and legal responsibility of this article published in EPHELS Journal belongs to the authors.

Acknowledgements or Notes

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