Evaluation of Palliative Care, Pain Management in Patients Receiving Chemo-Radiation in Sudan

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Abstract

The palliative treatment as active total treat of patients whose disease is not quick to respond to therapeutic management. The intention of the management in the palliative treatment phase are mainly to control the symptoms, to enhance the value of life to patients who have limited remaining period. The aim of the study to evaluate the treatment of pain protocols for chemo-irradiation Patients using the EORTC-QOL-C30 survey form and patients' prognosis. This study is a cross-sectional study, which was performed in amongst the cancer patients in Sudan. The sample magnitude was 100 patients whose different types of tumors. All patients were underwent chemo-irradiation. The radiotherapy was delivered by using tele-cobalt and Linear acceralator machines. The prescribed radiation dose was (20-30 Gy for 4 sessions or five

Gy fraction for 6 sessions). The following information was retrieved form patients' files system: patient age, gender, symptoms and its intervals, site of tumor and its magnitude, pain valuation, management outcomes, transfers and obedience to it, condition after treatment, and general condition at last recovery duration. The average age of the patients was 59 + 7.7 years (female) and 58 + 9.1 (male) (p < 0.005). Each EORTC-QOL-C30 questionnaire used to evaluate the patients' condition. The results of this research showed that there was augmentation stated (p < 0.005) in health related quality of life (HRQOL). The most patient's use type of drugs of chemotherapy to treatment are platinum and less number, patient's use drugs are Alkylating and Vinca alkaloids agents

*Keywords***:** Palliative Care, Cancer, Pain Management, Sudan

Introduction

Cancer treatment is considered as very complex due to its extent in tissues. The treatment of cancer is dependent on its the staging for example surgery uses in early stages (I-II), radiotherapy uses in middle and loco-regional spread (early and advance stage III) and chemotherapy treatment use for advance stages and other certain types. The complete removal of tumor using different surgical methods is beneficial if the normal surrounding tissues spared. The tendency of cancer to spread microscopically may affect the success of the surgery [1]. Radiotherapy is usage of ionizing radiation to eradicate cancer cells and shrink tumors. It can use also internally (brachytherapy) or externally (teletherapy). The effects of radiotherapy is restricted to the treated area. Radiotherapy kills the tumor cells in irradiation region by destroying their genetic structure. It is given in numerous sessions, permitting healthy soft tissue to recuperate among sessions. Radiotherapy uses to treat the solid cancers type [2].The occurrence of pain in patients with malignancy be contingent on the kind and phase of illness, though significant and prolonged pain can happen at the somewhat phase of the disease [3].

At the time of diagnosis and at early stages most of the patients have reasonable to severe pain1. On average, patients with the progressive disease have pain[4]. About 45-55% of cancer,

pain is acute or slight serve and 25-35% define extreme severe. In addition, pain related with cancer therapy occurs in about 30% of patients taking chemotherapy, radiotherapy or surgery, a figure that increases to 60% in children. Cancer pain signifies needless distress. Constant pain abolishes the quality of life of patients and eventually might cause self-kill [5]. Pain can cause depression with depression and denial of treatment programs. It leads to psychosomatic conditions, somatic preoccupation, Emotional welfare, sexual activity, caregiver necessities and communal relationships. Even once the fundamental illness is steady, pain avoids creative occupation and typical character in household and community [6]. Pain is usually considered an threatening indication by cancer patients; it may signify repeated or advanced disease, and its consequence should be discussed with the patient when the diagnosis of its origin is made. Cancer pain might reduce in the vast majority of patients through relatively simple means [7] [8]. The WHO advised that each country must give importance to starting a cancer pain issue policy. To this end, it has devised a simple, well-validated, and effective method for assuring the rational titration of therapy for cancer pain. The WHO painkilling hierarchy is effective in relieving pain for approximately 90% of patients with cancer [9]. This has been validated in many countries and different settings of care. This success rate is, however, not usually achieved in routine clinical practice because of various patient, physician and systemic factors [10]. The multimodalities method to cancer pain improves analgesia as well as other clinical outcomes [11]. Radiation therapy may be used to treat almost every type of solid tumor, including cancers of the brain, breast, cervix, larynx, liver, lung, pancreas, prostate, skin, stomach, uterus, or soft tissue sarcomas [12]. Radiation is also used to treat leukemia and lymphoma. Radiation dose to each site depends on a number of factors, including the radiosensitivity of each cancer type and whether there are tissues and organs nearby that may be damaged by radiation [13]. Thus, as with every form of treatment, radiation therapy is not without its side effects. Chemotherapy is the treatment of cancer with drugs ("anticancer drugs") that can destroy cancer cells. In current usage, the term "chemotherapy" usually refers to cytotoxic drugs which affect rapidly dividing cells in general, in contrast with targeted therapy. Chemotherapy drugs interfere with cell division in various possible ways, e.g. with the duplication of DNA or the separation of newly

formed chromosomes [14]. The indication of palliative treatment are patient has low performance status and received no benefit from prior evidence-based treatments. For palliative treatment of cancer patients, anti-cancer treatments such as radiotherapy, chemotherapy, molecular targeted therapy and hormonal therapy can help in achieving these goals [15]. There are many problems due to absence of early diagnosis and proper treatment of patient's that lead to most the patient come in late stage and death . it difficult to know the result of treatment after patient leave the hospital [16] .

Materials and Methods

The present study is a retrospective analysis done in the Radiotherapy department of Radiation and isotopes Center of Khartoum (RICK). This center is a regional cancer center under the National Cancer Control Program of the Government of Sudan for patient care, academics and cancer research. The cancer facility has an in-house pain clinic (running Out Patient Department four days a week) and a PCU. Overall, 150 consecutive patients, whose files with reasonable treatment details were available, were studied irrespective of the age, sex, primary and consultant in charge of the case. All these patients received palliative treatment. The following information was retrieved from RICK file in each case: Age at diagnosis, gender, main symptom and its duration, location of primary, disease extent, pain assessment, treatment outcome, referrals and compliance to it, status at last follow- up, and follow-up duration. The referral trend was analyzed in the form of total number of patients who presented with pain and those who were referred to the pain clinic of RICK, number of patients who reached pain clinic and the number of patients who defaulted. Patients of all types of advanced malignancies irrespective of their primaries were included in the study except those with bone metastases. Patients with bone metastases were excluded as it formed a major proportion of the patients with advanced cancer and their inclusion could have introduced a sampling bias in the study. The need for referral was assessed according to the status of the patient on the last day of PRT. The pain clinic details were obtained from the pain chart attached in the file where the pain assessment was done on an 11-point scale (0-10) with 0 representing "no pain at all" and 10

representing the "most severe pain that can be imagined". Duration of follow-up (DOFU) was defined as the date of last follow-up or death minus date of diagnosis and it was used as a surrogate parameter to estimate overall survival of the patient since data regarding patient's death was not available in most cases.

Results

Patient's characteristics

150 patients assessed in this study, there were 90 (60%) males and 60 (40%) females with a average age of 58 $\pm$ 9.15 (p > 0.05) years (range 37-82 years). The age distribution of the patients were 14 (9.3) in age of 35-44 years, 22 (14.6%) in age of 45-54 years, 24 (22.6%) in age of 55-64 years, 24 (22.6%) in age of 65-74 years and 46 (30.6%) in age of 75-84 years. (Table 1).

Table 1.   Age Group of Patient

Age groups (years)	Gender Number (percentage)	
	Male	Female
35-44	8(5.3%)	6 (4%)
45-54	14 (9.3%)	8 (5.3%)
55-64	16 (10.6%)	18 (12%)
65-74	22 (14.6%)	12 (8%)
75-84	30 (20%)	16 (10.6%)

Most of the cases are from breast (33%) followed by head and neck (24%), Female reproductive malignancies (19%), gastrointestinal tumors (9%), lung cancer (7%). Majority of the cases came in very advance stages IIIb , IIIc and IV approximately (83%). Most of the metastases were present in 54 (36%). The common site of metastasis is bone (44%), lung (20%),

and brain (18%). (Table 2)

Table 2. Patient Features

Characteristics	Number (percentage)
Total of patients	150
Age (in years)	
Mean	58 $\pm$ 9.15
Gender	
Male	90 (60%)
Female	60 (40%)
Metastasis Sites	
Bone	66 (44%)
Lung	30 (21%)
Brain	27 (18%)
Other	26 (17)

70 (46.7%) patients had treated by chemotherapy and 22 (14.7%) had combined treatment. The main purpose of the treatment were relieve the pain and symptoms due to the mass. The most common symptoms for palliation treatment using chemotherapy were pain 31(20.6%), 36 (28%) bleeding, 15 (11.7%) dysphagia, 10 (7.8%) dyspnea (Table 3). The radiation dose used were 20-30 Gy in 5-6 fractions (Table 4).

This Study showed that the most frequent type of chemotherapy use was platinum drug(25%) , Antitumor, Antibiotics and anthracyclines (18.5%) , Microtubule agents taxanes and Pyrimidine analogs (18.7%) , Alkylating agents and Vinca alkaloids (6.2%). 31 (20.6%) of the patients were have pain at the time of the disease assessment. 27 (87%) of patients were referred

Table 3 Sign and Symptoms

Signs and Symptoms	Number (Percentage)	
	Male	Female
Pain	19 (14.8)	12 (9.3%)
Bleeding	14 (10.9%)	22 (17.1%)
Dysphagia	5 (3.9%)	10 (7.8)
Dyspnea	5 (3.9%)	5 (3.9%)
Other	3 (2.3%)	2 (1.6%)

Table 4 Treatment characteristics

Characteristics	Number (percentage) N= 150
Cancer treatment	
None	12 (8)
RT only	22 (14.6)
CT	70 (46.7)
Surgery only	0 (0)
Surgery + CT	8 (5.3)
RT + CT	38
Indication of CT	
Cytostatic	86 (57.3)
Dysphagia	15 (10)
Respiratory problems	18 (12)
Pain	31 (20.7)

to pain clinical. Out of total 150 cases, 93 cases (61%) were having some degree of pain at the assessment done during the period of PRT or on the day of RT completion. In three patients no details were found regarding pain while in the remaining 56 (37%) cases, the patient reported no pain. Out of the 93 patients with pain, 33 patients (35%) were not referred to the pain clinic. Referral details of four patients were not found in the file, while the remaining 56 (61%) patients were referred to the pain clinic at RICK. All except one patient, who were referred to the pain clinic actually followed the instructions and were later seen in the pain clinic. Only five patients out of the total 150 cases were referred to hospice care.

Conclusion

Whole brain radiation of cancer patients with cerebral metastases is very well tolerated. Side effects are frequently met and can be compensated by applying steroids. The assessment of quality of life gives information on patients' improvement, which is more substantial in functioning, symptoms and global health. This study is a precondition for future investigations of the effect of whole brain radiation on cancer patients' quality of life.

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