

## Chapter Five

### Discussion, Conclusion, Recommendations

#### 5.1. Discussion:

Palliative radiotherapy play important role in pain management in palliative care and end of live support therefore this study to explore the effect of radiation therapy in metastatic breast cancer .The study was conducted at different Khartoum oncology hospital (RICK) for specific purpose of acquiring data for study .The study was conducted from 2014 to 2017 .This is questionnaires study deal with fellow up the patient after radiotherapy session to correspond the response with pain management ,quality of life and toxicity . Therefore to improve the palliative radiotherapy program by choosing the best radiotherapy regime which can reduce the toxicity and improve the symptoms response . The important of this study is using terms such as symptom improvement ratio (SIR) rather than traditional response rates might be more appropriate in describing the benefits of palliative radiotherapy .

The SIR is a very simple way of describing the clinical benefit of radiotherapy or the likely improvement afterwards in a particular palliative situation. It can also be used in conjunction with another factor such as the machine type and radiotherapy regimes , to which physicians are already accustomed. We realize that the SIR is not an all-inclusive term when it comes to describing palliative radiotherapy.

For example, it does not express the magnitude of the benefit, the duration of symptom improvement ,or the toxicity. the researcher recognize that many studies evaluating symptom improvement after palliative radiotherapy have used subjective methods

rather than validated tools to determine efficacy, and work therefore remains to be done to better document and describe various SIR. However, the SIR can give a straightforward estimate of benefit, and the concept is easier for physicians and patients to understand than are many of the various QOL scales and values that are being reported. the SIR might be helpful in describing the value of palliative radiotherapy and less confusing than is the term “response rate.” With use of the SIR, we have a better idea of the role of radiotherapy in various situations faced by patients with advanced cancer . It can also be used as another simple measure of treatment efficacy in this thesis we use of LANSS ,SF-MPQ and BPI for evaluating the effectiveness of radiotherapy .

Date which examines the role of radiotherapy in MBC and the first to use validated assessment tools in this setting. The findings support the hypothesis that radiotherapy is an effective treatment for a proportion of patients with MBC related pain, with 35% of assessable patients experiencing a clinically meaningful improvement in their pain. Of these, 12.5% had a complete improvement in their pain. There were no specific features that differentiated the complete responders from the other n patients though this may be due to the small number of complete responders.

There was no association between pain response and improvement in any other symptoms, therefore, palliative radiotherapy in MBC should only be considered for pain control.

Despite the improvement in pain control, there was no improvement in QoL or other symptoms, although there was a trend towards improved QoL in those who responded to radiotherapy. There may be many explanations for this: primarily, these patients are

near the end of life as shown by the median survival of 3.1 months in this study . Quality of life naturally deteriorates during this time and multiple symptoms co-exist in MBC such as dyspnoea and fatigue which are unlikely to be influenced by an improvement in pain.

The study data was retrieved from patients' files system of Radiation and Isotopes Center of Khartoum (RICK) which included patient age, grade, type of treatment, type of cancer cells and site of tumor MITS. They were followed for 12 weeks .

As can be seen from the short median survival of patients in the study, this is a frail population with poor life expectancy. Given that there were a number of questionnaires needing completed at each visit, it was felt to be in the patients' best interests for a study researcher to help the patient complete the questionnaires. Although this is not how these questionnaires were validated, it proved to be a most useful decision as many patients found the help provided by the study researcher to be most useful.

The researcher used many model of stander international questionnaire such as Brief Pain inventory (BPI) , which evaluate the pain in one to ten scale correspond with time duration .Short form McGill pain question (SFMPQ) , consist of 15 description (11 sensor ,4 affective ) the scale is from (0-4) in this study we used sensory component only lead Assessment of Neuropathic symptoms and sign (LANSS) which is pain questionnaires dived into section A complete by patient and section B complete by clinician .

Each of this model correspond with pain response rate, Quality of life and toxicity.

Ninety five patients were female and the median age (IQR) was 71.50 (35-55) years..

The median survival from the time of trial registration was 93 days (CI 68-118). The

Median (IQR) baseline BPI score was 57 (42.0-65.5).

There are many methods to measure it, such as direct method, actuarial method and Kalban-Meier method. First measure by the Direct Method (appendix- vital status data sheet), it's the simplest way of summarizing patient survival, by calculate the percentage of patients alive at the end of a specified interval such as 12 weeks, for the 100 patients at risk for at 12 weeks indicates that 39 Patients were alive at last contact and 61 had died before week 12..

The cost minimization is related to different in the result in this case a single energy machine with 2D capability versus a machine with 3D consideration the same objective such as palliative treatment.

## 5.2. Conclusion:

The thesis set out to examine radiotherapy for the treatment of pain associated with MBC. Pain can be a major problem in this condition and is not managed particularly effectively with standard analgesics. Some patients continue to experience severe pain despite intensive palliative medicine input and are often referred for non-pharmacological pain interventions. Radiotherapy is one such intervention for this pain but a strong evidence base for this is lacking .In metastatic breast cancer patients suffer from many symptoms related with site of metastasis pain ,dyspnea , bleeding ,problem with vision ....etc , this symptoms effect in patients daily life by decrease the quality of life and increase pain and toxicity Some time the chemotherapy can't control the localized pain or compression, also the oncologist didn't prefer to used it because the toxicity will be increase and the few response .

Palliative radiotherapy play important role in management of this symptoms, symptoms improvement ratio will help all to evaluation the benefit of radiotherapy in palliative cases. A major goal of palliative radiotherapy is control the symptoms by given the tumor dose the lethal dose with simple treatment planning and treatment. However patient's symptoms such as pain, compression and brain metastic symptoms can be controlled by radiotherapy.

The study was conducted at different oncology hospitals in Sudan (Khartoum oncology hospital (RICK), for specific purpose of acquiring date for study .the study was conducted from 2014 to 2017.

Symptoms improvement ratio (SIR) has been developed and become more and more popular in cancer management team.

The SIR represents, in absolute terms, the proportion of patients who, following treatment, have a clearly documented improvement in one or more predetermined objective and evaluable symptoms. It represents the average or approximate rate of clinically significant improvement in a specific symptom such as pain or hemoptysis.

The study showed that palliative radiotherapy can be an effective method of treating pain in MBC, and, in a proportion of patients, can be associated with dramatic improvements in pain.

Radiotherapy for pain control is not standardized with confusion as to whether large treatment fields should be used with the risk of increased toxicity or treating smaller areas with the risk of not treating the area of disease that is causing the pain.

In addition, by the time most patients with MBC develop severe pain, they are often approaching the final stages of their lives which again makes conducting a study in this group of patients difficult. The study showed that palliative radiotherapy can be an effective method of treating pain in MBC, and, in a proportion of patients, can be associated with dramatic improvements in pain. The use of wire markings in the radiotherapy planning stage proved highly successful at helping to localize the area of tumor to be targeted.

Patients with metastatic breast cancer, particularly in developing countries such as Sudan, may display a similar combination of disease and social characteristics. Control of local disease could improve quality and length of life, especially if limited

metastasis is present. Based on the studies in the elderly population, using the once weekly regimen is an acceptable regimen to use in palliative patients.

Palliative radiotherapy is simple for both modalities and technologies, Cobalt -60 provides the practical option for palliative radiotherapy such as low cost, easy maintenance and strong option for improved quality of life.

### **5.3. Recommendation:**

The researcher recommended that develop of Palliative Radiotherapy program base use Symptoms improvement ratio concept as reference concept to evaluation the role of radiotherapy in controlled the symptoms in palliative cases .

When deliver radiotherapy for patients in late stage breast cancer as palliative treatment many factor should be consider:

- Implantation of stander palliative radiotherapy program in each oncology hospital play important role in success the RT treatment
- The time is important factor which effect in patients response, time between the symptoms appearance and treat with first session.
- The radiotherapy regime which describe the suitable field size with minimum number of fraction should be chosen.
- Fellow up the patient should be consider in all palliative case to manage any incident before it appear.