

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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صدق الله العظيم

سورة الرحمن الآيات 1-6

Dedication

To beloved families whom did their best to support me in my whole life anywhere and anytime.

To my;

Parents

Husbands'

Sons

daughter

Brothers

Sisters and

Friends

Acknowledgment

I would like to express my gratitude and appreciation to all those who have supported me during the work presented in this thesis:

Dr. Mohamed Alfadil , my supervisors, and **Dr .Nahla Gafer** my co-supervisor for your scientific experience in clinical oncology, your initial ideas regarding this project, always being encouraging and enthusiastic, and guiding me through this long period of completing the thesis..

Abstract:

The value of radiotherapy for palliation is well known to oncologists but not necessarily to other physicians .Using terms such as symptom improvement ratio (SIR) than traditional response rates might be more appropriate in describing the benefits of palliative radiotherapy to other health care professionals.

Late detection and spread of the disease in the late stages of breast cancer due to proliferation causes multiple symptoms This study was conducted in the centers of tumors treatment in Sudan, represented in Khartoum oncology Hospital for (RICK) in the period 2014 to 2017.

The study examined the association between Palliative radiotherapy and the improvement of the symptoms associated with metastatic breast cancer. These include metastatic in the spinal cord and associated pain, brain metes and associated symptoms, bone metes , metastatic in the lung and finally spread in organs such as liver and others. The study also dealt with the connection between it and the improvement of the standard of life of the patient and toxic and other important factors and was achieved through a set of international standards questionnaire by which the calibration of the result

The obtained results enable the oncologist to assess the patient's palliative treatment and his role in the treatment of the case. Palliative radiotherapy regimes improves pain in a significant proportion of patients with MBC . It does not have a beneficial effect on other symptoms or on quality of life. The

findings support the hypothesis that radiotherapy is an effective treatment for a proportion of patients with MBC related pain, with 70% 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 patients though 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 .also there was significant different between patients who treated in coblat60 and patients treated in linear accelerator .the improvement in cobalt 60 is higher than it in linear accelerator .This clearly demonstrates that cobalt is better than a linear accelerator in cases of palliative therapy.

الخلاصة :

ان قيمة العلاج الإشعاعي للتخفيف هي معروفة جيداً لأخصائيي الأورام ولكن ليس بالضرورة لأطباء آخرين. استخدام مصطلحات مثل نسبة تحسين الأعراض (SIR) والعدد اللازم للعلاج (NNT) بدلاً من معدلات الاستجابة التقليدية قد يكون أكثر ملاءمة في وصف فوائد العلاج الإشعاعي التلطيفي خصوصاً لسرطان الثدي المتنقل .

الاكتشاف المتأخر وانتشار المرض في المراحل المتأخرة من سرطان الثدي بسبب الانتشار يسبب اعراض متعدده اجريت هذه الدراسة في مراكز علاج الاورام بالسودان متمثله في مستشفى الخرطوم لعلاج الاورام (الذره سابقا) -الخرطوم في الفترة ما بين 2014 الي 2017

تناولت هذه الدراسة الربط بين العلاج الاشعاعي التلطيفي وتحسن الاعراض المصاحبه لسرطان الثدي المتنقل متمثله في الانتشار علي مستوي الانضغاط في الحبل الشوكي للعمود الفقري والالم المصاحب له ,الانتشار في الدماغ والاعراض المصاحبه له ,الانتشار في العظام ,الانتشار في الرئه واخيرا الانتشار في الاعضاء مثل الكبد وغيره كما تناولت الدراسة ايضا الربط بينه وبين تحسن مستوي الحياه للمريض والسميه وغيره من العوامل الهامه وتم تحقيق ذلك عن طريق مجموعه من المعايير العالميه التي تمت بواسطتها معايره النتائج

النتائج المتحصل عليها تمكن اخصائي الاورام من تقييم بروتكولات العلاج التلطيفي للمريض ودوره في علاج الحالات وقد توصلنا في الدراسة ان العلاج الإشعاعي التلطيفي يحسن الألم في نسبة كبيرة من المرضى. ولكن ليس لها تأثير مفيد على الأعراض الأخرى أو على نوعية الحياة حيث كانت النتائج كالاتي :

العلاج الإشعاعي هو علاج فعال لنسبة من المرضى الذين يعانون من الألم الناجم عن الانتشار للمرض ، نسبه التحسن من الاعراض كانت 70% من المرضى الخاضعين للتقييم الذين يعانون من تحسن ملموس سريرياً في ألمهم. من هؤلاء ، 12.5 ٪ لديهم تحسن كامل في ألمهم. لم تكن هناك ميزات محددة تميز المستجيبين الكاملين عن المرضى الآخرين لم يكن هناك ارتباط بين استجابة الألم والتحسن في أي أعراض أخرى ، لذلك ، ينبغي فقط النظر في العلاج الإشعاعي المطفة في للتحكم في الألم. كما ان المرضى الذين تم علاجهم علي جهاز الكوبالت كانت نسبه التحسن اعلى بينما الذين تم علاجهم علي جهاز المعجل الخطي كانت اقل وهذا يبرهن بشكل واضح ان الكوبالت افضل من جهاز المعجل الخطي في حالات العلاج التلطيفي

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Abbreviations

PMBC	Palliative Metastatic Breast cancer
SIR	Symptoms Improvement Ratio
MBC	Metastatic Breast Cancer
WHO	World Health Organization
PRT	Palliative Radiation Therapy
GY	Gray
RICK	Radiation Isotopes Center of Khartoum
2D	Two Dimension
AP	Anterior Posterior
LINEAC	Linear Accelerator
IMRT	Intensity Modulated Radiation Therapy
RF	Radio Frequency
3D	Three Dimension
DVH	Dose volume histogram
WPS	Worst pain score
APS	Average pain score
LANSS	lead Assessment of Neuropathic symptoms and sign
BPI	Brief Pain inventory

SF-MPQ

Short form McGill Pain Question

Overall survival:

the time from diagnosis to last follow-up or demise due to any
Cause