Research Article

Role of Palliative Radiotherapy in Bone Metastasis in Patients with Cancer in Ganjavian Hospital

M.Dorchin[1,3] Anis Dorchin*

1.Oncology Department, Dezfol University of Medical Sciences ,Dezfol, Iran

2, Islamic Azad University Central Tehran Branch. Biochemistry Department

***Corresponding Author: Anis Dorchin.** Islamic Azad University Central Tehran Branch. Biochemistry Department

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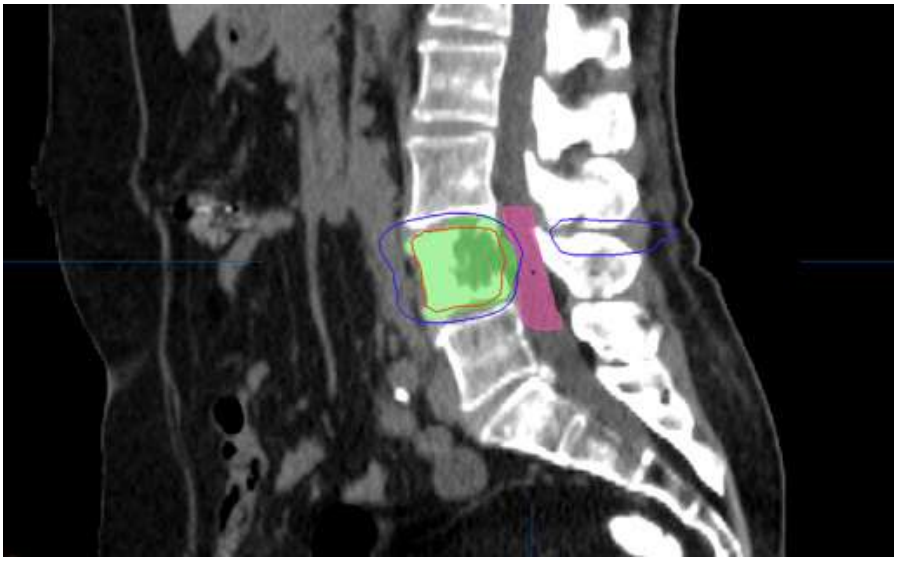
Introduction

The management of painful bone metastases requires multidisciplinary care, with external beam radiation therapy (EBRT) providing relief that is effective and time-efficient. Patients with bone metastases may require interventions including surgical decompression, osteoclast inhibitors, radiopharmaceuticals, and kyphoplasty or vertebroplasty, though EBRT should be included in the care of most of these patients, as well. Recent treatment-guideline publications for bone metastases greatly define the appropriate use of EBRT for this patient group, and they create a means by which treatment approaches may serve as quality measures of radiotherapy departments.

Materials and Methods

Between 1.6.2019 and 1.6.2020 a total of 48 patients, 33 patients with all Bone metastatic cancers esp. Breast and Prostate cancers were 11 males and 37 females with an average age of 38 years (minimum 27 and maximum 79 years). We reviewed the literature focusing on studies investigating the efficacy of hypofractionated radiotherapy for bone metastases. We also addressed the problem of treating multiple skeletal lesions with irradiation.



Results

External beam irradiation that our patients treated in Ahwaz center and other radiotherapeutics centers achieves pain palliation in more than 75% of patients with bone metastases, even with EBRT down to a single-dose administration.

The results of exclusive radiotherapy in the cord compression syndrome depend on a prompt diagnosis, patient presentation, and the intrinsic radiosensitivity of tumor cells in three patients. Palsy can always be avoided in these patients.

Irradiation can achieve complete pain relief in over 20% of patients and decrease pain markedly in the remaining cases with only a single-dose fraction (6-10 Gy), within 48 hours of irradiation and with little side-effects. Better results in terms of pain relief (80% complete responses) and duration of palliation come from fractionated irradiation (up to 17.5 Gy in 7 fractions or 30 Gy in 10 fractions), which however has a more delayed response (1- 2 weeks) and higher toxicity.

Discussion

In our study, the efficacy of external beam irradiation in the palliation of bone metastasis-related symptoms is confirmed by this study, even with short treatments and single-dose administrations. This is important for both patient expectations and the necessity for improved resource allocation concerning

the territorial distribution and waiting lists of radiotherapy centers. The issue of their efficacy in combination with anticlastic drugs (Bisphosphonates drugs such as Zoledronic acid) and/or external beam irradiation (EBRT) remains open and will be clarified only with further randomized clinical trials.

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