Role of Radiotherapy in Pain Palliation in Metastatic Bone Cancer: A Prospective Study

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Abstract: Metastatic bone cancers frequently need pain palliation for which Palliative Radiotherapy remains mainstay. Bone metastasis is stage IV cancer and the patients have few months of remannder life and they have distressing symptoms. Objective of this study is to evaluate efficacy of radiotherapy in pain palliation to improve the quality of life with negligible side effects. A total of 38 patients were given palliative RT 30Gy/10 fractions by telecobalt machine and observations were done. Bone is a preferred site to metastasize by few malignant tumours (osteotropic) like breast, prostate, kidney, lung, GIT, thyroid. Other primary tumours giving metastases to bones are myeloma (plasma cell tumours), ovarian tumours, cervix, unknown primary cancers mostly anaplastic variety. Metastatic bone disease is regarded as Stage IV disease which eventually affects the quality of life because of disabling skeletal related events, which usually are the consequences of advanced cancers. According to GLOBOCAN 2012, an estimated 14.1 million new cancer cases and 8.2 million cancer-related deaths occurred in 2012.

Magnitude of the problem of metastatic bone disease

Though there is availability of effective treatment with the help of radiotherapy and chemotherapy, patients with bone metastases have longer life than patients with visceral metastases. 6 This eventually gives distressing symptoms because of skeletal related events and affects the quality of life due to skeletal morbidity. 8 A major part of practice of oncology is concerned with pain palliation. There are various treatment modalities for pain palliation. 7 Among the available treatment modalities, radiotherapy since many decades, remains mainstay of the palliative treatment for bone metastases. More than 50% of the patients with the diagnosis of cancer receive radiotherapy as an adjuvant to surgery, chemotherapy or as a primary palliative treatment for metastatic lesions 5.10 considering the facts in the magnitude of the problem of metastatic bone disease, palliative treatment with radiotherapy since many decades was under evolution. The reasons were,

1. Relief from severe pain which was intended to give overall better quality of life, considering prolonged life. 9,11
2. Metastatic bone disease becomes symptomatic earlier during its clinical course. 12
3. High morbidity almost in one third of cases, because of skeletal related events and complications; patients need symptom palliation. 10
4. Life expectancy of patients with bone metastases varies widely, with a survival between 7 to 19 months.

Bone only metastases without visceral metastasis of Ca. Breast have a 5 year survival rate of 45% with median