



Contribution ID: 52

Type: **Poster**

Role of radiotherapy in multiple myeloma; a multicentric experience

Tuesday 20 June 2017 15:45 (5 minutes)

Background: Multiple myeloma (MM) is hematologic malignancy characterized by the accumulation of malignant plasma cells in the bone marrow. Recently, MM remains uniformly fatal with a median survival of approximately 50 months after diagnosis. MM is extremely susceptible to radiation treatment and targeted radiotherapy including bone-seeking radiopharmaceuticals, monoclonal antibodies conjugated to radionuclides (radioimmunotherapy), and radiotargeted gene therapy using recombinant oncolytic viruses (radiovirotherapy) now offers a new paradigm to target this systemic malignancy. Palliative irradiation of osteolytic lesions is a considerable component in the treatment for patients with multiple myeloma. The aim of this study was to assess indications for RT as well as its effectiveness in MM patients. **Patients and methods:** 67 patients were retrospectively analyzed with MMs who was admitted to multi-centric Institutes of Cancer during 5 years period. According to the staging system of Durie & Salmon 50 patients were classified as stage III. Nearly seventy percent of patients (47/67) were treated with radiotherapy of at least one and up to 6 bony lesions at different times. Evaluation for the effect of local radiotherapy on pain relief and bone re-calcification was performed. Complete information on dose, fractionation and volume of radiotherapy was available from 35 patients treated in 56 target volumes for pain relief, and from 32 patients treated in 48 target volumes for recalcification. Total radiation doses varied between 8 Gy to 50 Gy (median dose 25 Gy in 2.5 Gy fractions, 5 times a week). **Results:** Radiotherapy resulted in complete local pain relief in 20(29.9%) and partial local pain relief in 36(53.7%) of the patients. The higher total radiation doses and higher age at the time of radiotherapy were significantly associated with a higher likelihood of pain relief, whereas no significant association was detected for concurrent systemic treatment, type and stage of myeloma and location of bone lesions. Re-calcification was observed in 47.9% of irradiated bone lesions. The higher radiation doses were significantly associated with an increased likelihood of re-calcification. Side effects of radiotherapy were generally mild. **Conclusions:** Despite the introduction of novel effective agents in the treatment of MM, RT remains a major therapeutic component for the management in 70% of patients. It continues to play a prominent role in the palliative treatment and it effectively provides pain control. However, the therapeutic measures appear to develop a better analgesic effect in elderly. Higher total biological radiation doses were associated with better pain relief and re-calcification in MM patients.

Keywords: Multiple myeloma, Radiation therapy, Analgesic effect, Re-calcification, Side effects.

Institution

Egyptian Nuclear and Radiological Regulatory Authority

Country

Cairo, Egypt

Author: ABAZA, AYA (Assistant Prof. of Safety and Prevention of Oncology at ENRRA)

Co-author: EL-SHANSOURY, Hala (Lecturer in Radiation Safety Department, ENRRA)

Presenter: ABAZA, AYA (Assistant Prof. of Safety and Prevention of Oncology at ENRRA)

Session Classification: Tuesday afternoon - Poster Presentations - Screen1

Track Classification: Clinical Radiation Oncology