ROLE OF RADIOTHERAPY IN MULTIPLE MYELOMA; A MULTICENTRIC EXPERIENCE

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Introduction

• Multiple myeloma (MM) is hematologic malignancy characterized by the accumulation of malignant plasma cells in the bone marrow. Recently, it 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, radioimmunotherapy, and radiovirotherapy now offers a new paradigm to target this systemic malignancy.
Introduction

- **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.
Results I

- 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 70% of patients (47/67) were treated with radiotherapy alone 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.
- Total radiation doses varied between 8 Gy to 50 Gy (median dose 25 Gy in 2.5 Gy fractions, 5 times a week).

Clinical Presentation of Patients

- Bone pain: 55 (82.1%)
- Fatigue: 28 (41.8%)
- Pallor: 12 (17.9%)
- Weight loss: 4 (6%)
- Neurological symptoms: 2 (3%)
Results II

- 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.
Results III

- 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.
Discussion/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.