

## Re-irradiation in head and neck malignancies: Challenges and outcomes

Chelakkot G Prameela\*, Anoop R, Sruthi K, Rahul Ravind and Ram Madhavan

Department of Radiation Oncology, Amrita Institute of Medical Sciences, Kerala

**Introduction:** Head and neck malignancies account for about 30% of all malignancies in India. Treatment of head and neck malignancies has always been challenging and radiation remains the mainstay, be it in primary, adjuvant or palliative settings. Sophisticated aggressive approaches have translated to acceptable loco-regional controls, but loco-regional recurrences and second malignancies in the treated areas are also on the increase, the incidence being 30%-50% and 20% respectively. This poses a further challenge and the armamentarium includes surgery, chemotherapeutic agents, targeted therapies and also reirradiation. Advanced state-of-the-art technologies in the field of re-radiation have shown a ray of hope in the otherwise bleak scenario.

**Aim:** Analysis of patients treated with re-radiation was done with a view to look into clinical outcome and toxicity profile in recurrent and second primary malignancies in head and neck region.

**Materials and Methods:** Data of patients re-irradiated were retrieved from the electronic medical records and planning systems and was analysed. Factors like, site, stage of disease, intent and technique of treatment, gross tumour volume, cumulative dose achieved, interval between treatments, toxicities and details of hospitalization were looked into.

**Results:** Re-radiation was offered either as a radical or as an adjuvant option. Both intensity modulated radiotherapy and 3 dimensional conformal radiotherapy, were used. Median cumulative dose achieved was 116 Gy. Major acute toxicity encountered was grade III mucositis. Acute myelo-toxicities were not observed. Age, performance status and interval between initial and re-irradiation were found to be important prognostic factors influencing overall survival and treatment related morbidity.

**Conclusion:** Advent of modern techniques has made re-irradiation technically feasible, achieving predictable loco-regional control and overall survival with acceptable toxicity profiles, as proved by GORTEC trials. Though long term follow-up data is wanting, re-irradiation is a viable option in selected patients and requires dedicated and diligent care.

### Biography:

Dr. Chelakkot Govindalayathil Prameela completed her post-graduation in Radiation Oncology from Manipal Academy of Higher Education, India. She has 17 years of experience as Radiation Oncologist. She presently is an Associate Professor, in the Department of Radiation Oncology, at Amrita Institute of Medical Sciences, Kochi, Kerala, India. She is interested in Head and Neck and thoracic oncology and Female health care. She has international and national presentations on breast, stomach, vagina, and head and neck malignancies. She is involved in works on androgen receptors in breast cancer, dysphagia aspiration-related structures in head and neck radiation, and in gynaecological malignancies.