TO STUDY PALLIATION OF SYMPTOMS BY A HYPOFRACTIONATED RADIOTHERAPY SCHEDULE IN INOPERABLE SQUAMOUS CELL CANCERS OF THE ORAL CAVITY

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ABSTRACT

Background: It is widely recognized that Palliative Radiotherapy provides effective palliation and an improvement in ‘Quality Of Life’ (QOL) in advanced, inoperable head and neck malignancies. Various palliative radiation therapy regimens are described in the literature. This prospective study tried to assess and quantify symptom relief and duration of symptom relief in patients with inoperable squamous cell carcinoma of oral cavity who underwent a hypofractionated radiotherapy with 50Gy in 20 fractions with daily 2.5Gy per fraction daily for four weeks.

Methods: Between January 2015 and August 2016, seventeen consecutive biopsy proven locally advanced inoperable Squamous Cell Carcinoma of the oral cavity patients were recruited into the study after getting an informed consent. All of them were planned for 50 Gy in 20 fractions, 2.5Gy per fraction daily with five fractions per week for a total duration of 4 weeks. Patient’s symptoms and quality of life assessment was done before starting treatment, after radiation therapy and on first followup with the EORTC QLQ-C30 & EORTC QLQ - H&N35& EuroQol. Median scores of the individual domains of quality of life before treatment, after radiation and in the first follow up with this radiation schedule were documented. Statistical Analysis was done using SPSS 17.0 software.
**Results:** Majority of the patients were men (82%) with a median age of 54 years. About 71% of patients were stage IVA disease. Out of 17 Patients 13 completed 50Gy in 20 fractions. Two of them discontinued due to personal reasons. In two patients number of fractions were cut short due to radiation induced mucositis and poor tolerance. Median RT duration was 27 days. During the first follow up at 6 weeks, eight patients (57%) had partial response and three patients (21.5%) had stable disease while three (21.5%) had progressive disease. At the end of the study period, ten patients were alive and symptomatically improved and two patients had survival more than 12 months. Assessment of change in quality of life over time showed functional scales like emotional functioning, cognitive functioning and social functioning were found significant improvement at 1% or 5% alpha level (p=0.009, 0.017, 0.016 respectively) and change in Physical and Role functioning scores were significant at 10% alpha level (p=0.150, 0.050 respectively). There was significant reduction in pain score.

**Conclusions:** Results of our study shows that palliative radiotherapy with 50 Gy in 20 fractions over 4 weeks is an effective, well tolerated and safe regimen which could achieve reasonable palliation with good symptom control and acceptable toxicity profile. Statistically significant Quality of life improvement lasting for a minimum six weeks was attained after completion of treatment with this regimen.

Keywords: oral cavity, hypofractionation, quality of life, palliative radiotherapy, EORTC QLQ-C30, EORTC QLQ - H&N35, EuroQol