

HYBRID SIMULTANEOUS INTEGRATED BOOST TECHNIQUE IN LOCALLY ADVANCED TONGUE CANCER – A PROSPECTIVE STUDY

Dr. Vijayaveeran.P

Aim

To evaluate the feasibility of hybrid simultaneous integrated boost (SIB) technique and its efficacy in the treatment of locally advanced carcinoma tongue.

Materials and Methods

Ten patients with locally advanced carcinoma tongue stage IVA and IVB planned for concurrent chemoradiation from September 2015 to August 2016 were enrolled into the study.

Radiation was designed to be delivered in two phases. In Phase 1, conformal technique is used to deliver a TD 36Gy (200cGy/day in 3.5 weeks) to the planning target volume (PTV). After 36Gy re-planning was done. In Phase 2, IMRT technique is used and two PTV's, the high risk PTV (residual primary and residual neck nodes) and the low risk PTV (the entire PTV contoured in phase 1 excluding the cord) were contoured. A TD 24Gy at 240cGy/day to the high risk PTV and TD 20Gy at 200cGy/day to the low risk PTV in 10 days was simultaneously delivered. These patients were compared with 10 matched control patients treated in 2015 with conformal technique TD 60Gy (200cGy/day) in 6 -7 weeks concurrent with chemotherapy.

Results

The median age at diagnosis was 44 years. With regards to local regression it was 40% Vs 30%, nodal regression 80% Vs 50% in the study and control groups respectively.

Acute toxicities like dermatitis, mucositis and nutritional support needs were comparable. Treatment breaks during radiation was more in the study population (range 5 - 12 days) mainly due to 3 weekly cisplatin.

Conclusion

Hybrid simultaneous integrated boost (SIB) technique appears to be a feasible technique concurrent with chemotherapy in terms of superior local control and comparable toxicity profile. Long term follow up to assess overall survival is needed before definitive conclusions can be made.

Keywords: Simultaneous Integrated Boost , Locally advanced , Tongue, Cisplatin, Toxicity, Planning Target Volume, Hybrid