3D-Conformal versus Intensity Modulated Radiation Therapy in Locally Advanced Head & Neck Carcinoma; Parotid Glands Sparing Attempt.

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ABSTRACT

Objectives: The study is a comparative randomized study between two groups of patients, the aim of which is to compare 3D conformal radiation therapy (3D-CRT) and intensity modulated radiation therapy (IMRT) in treating non-metastatic locally advanced head & neck squamous cell carcinoma; evaluating and comparing both techniques as acute and late treatment related toxicity.

Patients and Methods: Between June 2014 and March 2016, 30 patients with locally advanced head & neck carcinoma were treated by 3D-CRT technique (Group A) and compared to another 30 patients treated by IMRT (Group B). Both groups were treated at Kasr El-Ainy Center of Clinical Oncology and Nuclear Medicine (NEMROCK). The two groups were treated concurrently with platinol as a weekly sensitizer. Patients were assessed for treatment related toxicity using the European Organization for research and treatment of cancer, the Radiation Oncology Group (EORTC/RTOG).

Results: Group A showed a higher incidence of treatment related toxicity compared to group B, particularly xerostomia. IMRT was clearly able to preserve the parotid gland function.

Conclusion: IMRT technique was clearly able to increase the dose delivery to the target volume and spare at least one of the parotid glands.