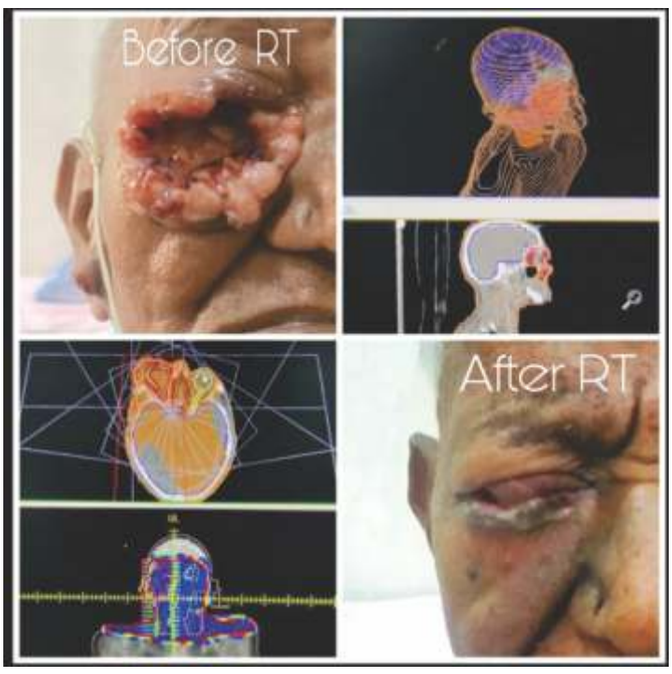
MEDIBEATS
The Medical Bulletin

In Radiotherapy

A rare case of recurrent squamous cell carcinoma of eyelid effectively treated by the use of high precision cutting edge techniques of Radiation treatment.

85yr old patient evaluated for growth in Right eyelid a year back and with suspicion of OSSN - Occular surface squamous neoplasia and advised excision. Histopathology revealed squamous cell carcinoma, Grade 2 in February 2021 and he haven't received any further adjuvant treatment. After an year he came now with local recurrence. And on examination we found an ulceroproliferative growth, infraorbital region measuring 11*8*1cm and with involvement of preauricular node of size 1*1 cm. We planned for Radical radiation using IMRT- Intensity Modulated radiation therapy.



Treatment Technique-

Patient was immobilised with thermoplastic mask. CT for radiation planning done from vertex to shoulder with 3mm cuts. Marks like leadshot are placed over patient's surface using laser to facilitate accurate daily position. For definitive radiation CTV (Clinical target volume) was defined as GTV (Gross tumor volume)+1.5cm margin. Guidelines for delineation of elective nodal CTV were followed. PTV (Planning Target Volume) was extended 3mm around CTV. IMRT plans were generated. Prescription dose was 54 Gy to CTV and boost to high risk regions of primary and involved lymph nodes of about TD 66 Gy.

The clinical target volumes of the primary tumor (CTV-primary) and of the lymph nodes (CTV-elective) were expanded by 0.0, 1.5, 3.0, and 5.0 mm in all directions, creating the planning target volumes (PTVs). We performed IMRT dose calculation using our class solution for each PTV margin resulting in final plan delivering total dose of 66 Gy using IMRT- to the

tumor and 60 Gy to the subclinical tumor volume and nodal regions with restricted doses to contralateral eyeball and optic nerve over a course of six weeks . Patient tolerated treatment well and had a good resolution of the primary and nodal region.

We here by emphasis that the recent advances in radiation delivery techniques has resulted in improved accuracy of target volume definition and delineation, as well as developments in treatment planning systems and linear accelerator delivery capabilities leading to improved dose distributions and conformity achieving complete response in most of cancers.

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