

Stage III-IV sinonasal and nasal cavity carcinoma treated with three-dimensional conformal radiotherapy

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ABSTRACT

Aims and background. To report the dosimetric data and clinical outcomes of patients with advanced neoplasm of the paranasal sinuses and nasal cavity, treated by three-dimensional conformal radiotherapy.

Methods. Between 2000 and 2005, 31 consecutive patients were treated for locally advanced tumors of paranasal sinuses and nasal cavity. The primary tumor was located as follows: maxillary sinus 15 (48.4%); ethmoid sinus 10 (32.3%); nasal cavity 6 (19.3%). The patients were separated in two groups according to the modality of treatment: group A included 21 patients treated with postoperative three-dimensional conformal radiotherapy with or without chemotherapy; group B included 10 patients treated with radical three-dimensional conformal radiotherapy with or without chemotherapy. The median radiation dose to the planning target volume was 60 Gy (range, 56-63) for patients who underwent complete surgical resection and 68 Gy (range, 64-70) for those who did not have tumor resection or patients with residual disease.

Results. The median follow-up was 42 months. Five-year local tumor control and overall survival actuarial rates were 74% and 72%, respectively, in the postoperative setting, 20% and 25%, respectively, with the primary radiotherapy. Local recurrence was the most common site of failure. No patient developed radio-induced blindness; 4 patients underwent enucleation as part of radical surgery. Dosimetric data are reported.

Conclusions. The local control rate for these tumors remains low. The prognosis depends on localization, tumor stage and treatment modality. Three-dimensional conformal radiotherapy reduces the risk on optical pathways but does not modify outcome.

Key words: chemotherapy, local control, sinonasal cancer, surgery, three-dimensional conformal radiotherapy.

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