

RADIOTHERAPY FOR SQUAMOUS CELL CARCINOMA OF THE MAXILLARY SINUS

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Purpose : Malignant tumors arising from the maxillary sinus are relatively rare among head and neck cancer. The aim of this retrospective study is to analyze clinical outcome of 32 patients with squamous cell carcinoma of maxillary sinus treated by curative intent in a medical center.

Materials and Methods : Chart, radiotherapy data, and CT scan were reviewed in detail. There were 24 males and 8 females. Their age ranged from 33 to 76 (median 63) years old. Most patients (84.4%) presented with T4 disease. Treatment modalities were radical surgery + postoperative radiotherapy (20 cases), radiotherapy with (7 cases) or without (5 cases) chemotherapy. The range of radiation dose was 50-90 Gy with a median of 70 Gy by conventional fractionation.

Results : The estimated local control rate at 5 years was 57.0%. The 5-year overall and disease-free survival rates were 12.5% and 40.7% respectively. Thirteen of 32 (40.6%) patients developed tumor recurrence or metastasis. The failure pattern illustrated 8 local recurrences, 1 neck metastasis, 1 distant metastasis, 1 local recurrence with distant metastasis, and 2 local recurrences with neck and distant metastasis. Kaplan-Meier survival analyses and log-rank test showed that age was the most important prognostic factor affecting disease-free survival ($P = 0.018$) and overall survival ($P = 0.059$).

Conclusion : Our data suggest that primary recurrence is the major site of failure. Except for adequate surgical resection, approaches that can enhance radiation effect (3-D conformal or intensity-modulated radiotherapy and altered fractionated radiotherapy) and concurrent chemotherapy deserve to be tried in the future.

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Key words: Maxillary sinus, Squamous cell carcinoma, Radiotherapy

INTRODUCTION

Tumors of the paranasal sinuses account for approximately 3% of all head and neck malignancies. Carcinomas arising from the maxillary sinus comprise 80% of this group of tumors. The majority of patients presents with

locally advanced disease at diagnosis because its symptoms are nonspecific and resemble chronic sinusitis. Although surgery is the major treatment modality, postoperative adjuvant radiotherapy is usually indicated for patients with advanced stage, inadequate surgical margin or residual tumors. The outcome of treatment

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