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Management of the N0 neck in maxillary sinus squamous cell carcinoma

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Importance

Malignant tumors of sinonasal tract are rare, constituting about 3% of tumors arising in the head and neck and <1% of all malignancies. Among subsites of disease, the maxillary sinus is the most common. Because of the rarity of these cancers, the optimal treatment regimen remains elusive. Advances in therapy have resulted in Improvement in survival for maxillary sinus squamous cell carcinoma in the past decade. However, the management of the neck for these patients is controversial.

Objective

To review and discuss the role of treatment of the neck in patients with maxillary sinus squamous cell carcinoma through the experience of a single, high volume academic institution.

Study Design

Retrospective case series

Setting

Tertiary academic head and neck cancer center

Subjects and Methods

Patients who were treated for maxillary sinus squamous cell carcinoma at a single institution from the years 2000-2018 were identified and reviewed. Patients with complete treatment and follow up data were included.

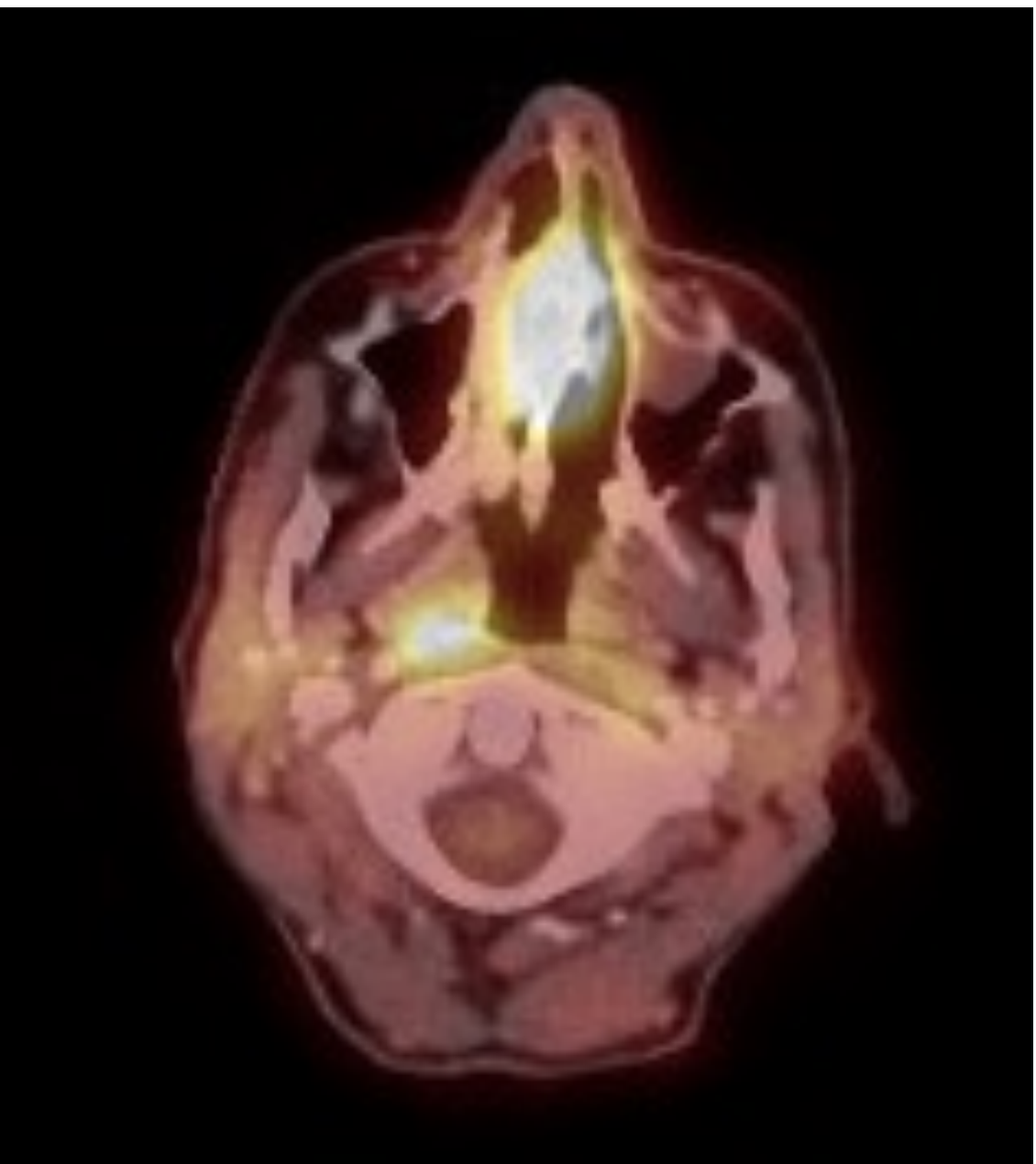
Subject demographics

55 patients were identified for inclusion in the study. Mean follow up was 40 months (range 1-199 months).

- Average age at diagnosis: 61 (range 34-92)
- Majority male (62%) and white (58%)
- Disease stage
 - T3: 10/55 (18%)
 - T4: 39/55 (71%)
- 46 of 55 patients (84%) had clinical N0 disease on presentation

Management and outcomes

Treatment of N0 neck (N = 46)	n (%)
No treatment	6 (13%)
Neck dissection (ND) only	2 (4%)
Radiation therapy (RT) only	32 (70%)
ND and RT	6 (13%)
Outcomes (N = 55)	
Local persistence	7 (13%)
Local recurrence only	9 (16%)
Distant recurrence only	2 (4%)
Local and distant	2 (4%)
Local and regional	1 (2%)
Regional recurrence only	0 (0%)



Example of enlarged, hypermetabolic retropharyngeal lymph node in patient presenting with sinonasal SCC

Results

Of patients with clinical N0 disease, 6 patients (13%) had no treatment of the neck, 2 patients (4%) had a neck dissection (ND) only, 32 patients (70%) had radiation therapy (RT) only, and 6 patients (13%) had both a ND and RT. Of those that had an elective ND, no patients (0/8) had occult nodal disease on final pathology. In follow up, 7 patients had local persistence, 9 developed local recurrence, 2 developed concurrent local and distant recurrence, 2 had distant recurrence only, and one had concurrent local and regional recurrence. In the patient with the regional recurrence, this patient had nodal disease present on presentation and had undergone a neck dissection and post-op RT. Among patients presenting with neck disease, three patients were noted to have retropharyngeal lymphadenopathy on pre-treatment scans, who were treated with RT with no recurrence.

Conclusions

Regional recurrence rates are extremely low for patients with maxillary sinus cancer. Single modality treatment (ND or RT) of the neck is adequate. RT may offer the advantage of treating the risk of retropharyngeal nodal metastases.