

Prognostic Factors for Patients with Sinonasal Undifferentiated Carcinoma

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Introduction

Originally described in 1986, sinonasal undifferentiated carcinoma (SNUC) is a rare and aggressive malignancy of the nasal cavity and paranasal sinuses. Although the majority of patients diagnosed with SNUC have a poor outcome, there are patients that, with treatment, do not develop recurrences and are essentially cured of their disease. Currently, there are no prognostic factors in the literature that can differentiate these two groups of patients.

Objective

This study was designed to determine factors that affect disease-free and overall survival in patients diagnosed with SNUC.

Methods

Retrospective review of 12 patients treated for SNUC from 1980 to 2006. Hospital charts were reviewed, collecting information regarding location and extent of tumor via radiographic and surgical findings, treatment modality, and follow-up. A pathologist also reviewed histologic slides from each patient to confirm the diagnosis of SNUC.

Orbital Involvement

Patient ID	Orbital Involvement	Orbital Exenteration	Disease-free survival (months)	Overall survival (months)	Outcome ^a
10	no involvement	no	5	20	DOC
6	no involvement	no	33	33	NED
4	no involvement	no	55	55	NED
7	no involvement	no	115	115	NED
9	orbital invasion	no	0	7	DOD
12	orbital invasion	no	6.5	28.5	DOD
2	orbital invasion	yes	7.5	19.5	DOD
11	orbital invasion	no	12	15.5	DOD
1	orbital invasion	no	13	35.5	DOD
8	orbital invasion	yes	15	17	DDT
5	orbital invasion	no	26.5	26.5	NED
3	orbital invasion	no	77	77	NED

^a DOD: died of disease, NED: no evidence of diseases, DDT: died during treatment (secondary to complications), DOC: died of other cause

Dural and Orbital Involvement

Patient ID	Orbital Involvement	Dural Invasion	Disease-free survival (months)	Overall survival (months)	Outcome ^a
6	no	no	5	33	NED
4	no	no	33	55	NED
7	no	no	55	115	NED
9	yes	no	0	7	DOD
10	no	yes	5	20	DOC
11	yes	no	12	15.5	DOD
8	yes	no	15	17	DDT
3	yes	no	77	77	NED
12	yes	yes	6.5	28.5	DOD
2	yes	yes	7.5	19.5	DOD
3	yes	yes	13	35.5	DOD
5	yes	yes	26.5	26.5	NED

^a DOD: died of disease, NED: no evidence of diseases, DDT: died during treatment (secondary to complications), DOC: died of other cause

Dural Invasion

Patient ID	Dural Invasion	Disease-free survival (months)	Overall survival (months)	Outcome ^a
9	no invasion	0	7	DOD
11	no invasion	12	15.5	DOD
8	no invasion	15	17	DDT
6	no invasion	33	33	NED
4	no invasion	55	55	NED
3	no invasion	77	77	NED
7	no invasion	115	115	NED
10	invaded	5	20	DOC
12	invaded	6.5	28.5	DOD
2	invaded	7.5	19.5	DOD
1	invaded	13	35.5	DOD
5	invaded	26.5	26.5	NED

^a DOD: died of disease, NED: no evidence of diseases, DDT: died during treatment (secondary to complications), DOC: died of other cause

Results

Patients presenting with neither orbital nor dural involvement have a longer disease-free and overall survival when compared with patients presenting with orbital and/or dural involvement. There does not appear to be a difference in disease-free and overall survival for patients presenting with both orbital and dural involvement or either orbital or dural involvement. Both groups of patients have an equally poor prognosis. Cribriform plate involvement and intracranial invasion at the time of presentation do not affect disease-free or overall survival in this patient cohort (results not shown).

Conclusion

Dural invasion and/or orbital involvement at the time of diagnosis indicates a poor prognosis for patients with SNUC. Cribriform plate involvement and intracranial invasion do not appear to predict prognosis in this patient cohort.