

Introduction

Few case series have evaluated the clinical presentation and outcomes of patients with brain metastases from the head and neck. Identification of clinical and genomic risk factors portending reduced survival could help to guide clinical management.

Methods

We performed a retrospective review of the Mount Sinai Electronic Health Record from 2000-2018 of patients with confirmed diagnosis of head and neck cancer and brain metastases (BM). Patients with intracranial extension of primary disease were excluded. Data related to patient demographics, diagnosis, treatment, and clinical outcomes were recorded from the medical record. Survival analysis was performed using the Kaplan-Meier method and calculated as time from BM diagnosis to date of death or last follow-up.

Results

We identified 22 patients (16 male, 6 female) with head and neck cancer who subsequently developed a BM. Median age at BM diagnosis was 59 years (range, 41 – 81) and median time from primary diagnosis to BM was 1.7 years (range, 0.6 – 10.6). Squamous cell carcinoma (SCC) was the most common primary histologic diagnosis (n=14, 64%). Other primary diagnoses included papillary thyroid (n=3, 14%), papillary adenocarcinoma (n=1, 5%), nasopharyngeal carcinoma (n=1, 5%), mucoepidermoid carcinoma (n=1, 5%), high-grade adenocarcinoma (n=1, 5%), and adenoid cystic carcinoma (n=1, 5%). Of the 14 patients with SCC primary diagnosis, 7 (50%) were HPV positive, 5 (36%) were HPV negative, and 2 (14%) were HPV unknown status. Nine patients (41%) underwent surgical resection and radiotherapy (RT) for BM treatment, 7 patients (32%) received only RT, 2 patients (9%) received only surgical resection, and 4 patients (18%) did not receive treatment. Median overall survival from time of BM diagnosis was 4.8 months.

Conclusions

Survival for patients with head and neck brain metastases remains dismal. SCC was the most common histologic entity to metastasize to the brain, of which 50% were HPV positive.

Learning Objectives

- To identify clinical parameters associated with head and neck BM
- To evaluate clinical factors associated with survival in patients with head and neck BM
- To evaluate clinical factors associated with intracranial progression in patients with head and neck BM

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