

BACKGROUND

Head and neck squamous cell carcinoma (HNSCC) is the sixth most common cancer diagnosed in the United States. Over 500,000 new cases of HNSCC are diagnosed worldwide each year. Unfortunately, with the development of new therapeutic modalities little change has been seen in the overall survival of patients leaving significant work to be done.

The HPV status of patients with HNSCC impacts patient treatment and outcome. It is prudent to consider new approaches to this subset of HNSCC patients who respond well to a variety of therapies at varying intensities. Although HPV is traditionally associated with tumors of the oropharynx, our aim was to see if there was a subset of patients with HPV+ tumors of the oral cavity and characterize their treatment and survival.

HPV is typically associated with the lymphoid tissues of the oropharynx, and due to the relative paucity of these tissues in the oral cavity, it is generally not considered a major factor in the pathogenesis or prognosis of oral cavity tumors.

METHODS

From 2006 to 2019, 39 patients were identified with HPV positive tumors of the oral cavity. All patient's tumors were diagnosed as HPV positive via in situ hybridization (ISH). All patients were treated at a single dedicated Head and Neck Department in Buffalo, NY. Primary treatment for all patients was surgical resection, with neoadjuvant chemotherapy and adjuvant (chemo)radiotherapy used selectively. Patients were selected irrespective of stage or smoking status. ISH testing is predominantly used at our institution over P16 status due to historical discordance in our experience between P16 and HPV status.

RESULTS

The median age of the patients was 64 years old (range 41-84 years). There were 21 men and 18 women. 16 patients never smoked, 8 were former smokers of >5 years since quitting, and 15 were active smokers. Mean follow-up was 7.6 years (range 5 months – 13.5 years). 11 patients were positive by P16, 6 negative, and 22 did not have P16 tested. All (39/39) patients were HPV positive by ISH testing.

Two patients had carcinoma in situ, 17 had stage I/II disease, and 20 presented with locoregionally advanced disease. 24/39 (62%) had their primaries in the tongue. There were 6 gingival, 5 floor of mouth, 2 retromolar, and 2 buccal primaries.

OS was 82% (32/39). Eighteen of 19 (95%) patients with carcinoma in situ or stage I or II disease are without evidence of disease (NED) or dead of unrelated causes while NED (DOC) as of last follow-up. Six of 20 patients (30%) with stage 3 or 4 disease have died of disease (DOD). There was one treatment death during adjuvant chemoradiotherapy.

TREATMENT vs STAGE

	Stage 0,1	Stage 2	Stage 3	Stage 4
SURG	11	7	1	3
SURG + CRT				3
CTX + SURG		1		6
CTX + SURG + CRT			2	4
CTX + CRT				1

Legend

CTX: induction chemotherapy
SURG: surgery
CRT: adjuvant chemoradiotherapy
NSURG: neurosurgical intervention

PR: partial response
CR: complete response

NEC: neck
LOC: local
DIS: distant

Recurrences

Site	NED, DOC	DOD	Salvage Therapy For NED Patients
LOC	2	3	SURG + RT, SURG
LOC + NEC	1	1	SURG + CRT
LOC +NEC+DIS	0	2	
NECK	3	0	NSURG, NSURG+RT, CTX + NSURG

CONCLUSIONS

This is a select series of patients with limited follow-up. There are several major limitations to this study which prevent detailed conclusions. First, this study is of limited size, with a broad variety of patients and tumor characteristics. Second, the large number of patients without P16 status, the traditional marker for HPV status, prevents easy comparison to other studies.

Despite these limitations, the survival, demographics and outcomes of HPV associated tumors of the oral cavity appear to most strongly correlate with those of HPV negative tumors. As such, the conventional treatment of excluding oral cavity cancers from series studying the effect of HPV in head and neck cancers appears appropriate.

REFERENCES

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