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The impact of COVID-19 on head and neck cancer treatment: a comparison of patients before and during the pandemic

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Introduction

The current coronavirus (COVID-19) pandemic has had a profound impact on patient care due to delays in healthcare delivery. Studies have demonstrated that delays between initial symptoms, diagnosis, and definitive treatment of head and neck squamous cell carcinoma (HNSCC) have been associated with tumor progression and consequently affecting the prognosis of patients. Herein, we aim to compare wait times of definitive treatment in patients newly diagnosed with HNSCC before the pandemic versus those seen during the early pandemic at a single academic institution.

Methods

Retrospective chart review of patients newly diagnosed with HNSCC who presented between September 10, 2019 – September 11, 2020 were included.
Pre-covid pandemic period: **9/10/2019 – 03/10/20**
Covid pandemic period: **03/11/2020– 09/11/20**

The following were assessed:

- Demographics
- Time to diagnosis (scan & biopsy)
- Time to definitive surgery
- Tumor characteristics

Results

Table 1: Patient Characteristics

	Total n (%)	Pre-COVID period	COVID period	p-value
Total number	137	77	60	
Median age, years (range)	65.5 (23-93)	65 (43-92)	67 (23-87)	0.441
Sex				
Male	99 (71.7)	53 (67.9)	46 (76.7)	0.257
Female	39 (28.3)	25 (32.1)	14 (23.3)	
Median distance traveled, miles (range)	36 (1-281)	35.5 (2-221)	38 (1-281)	0.541
Median duration of symptoms prior to first vist, weeks (range)	16 (0-261)	19 (2-261)	16 (0-120)	0.483
Median duration from diagnosis to first visit, days (range)	27 (0-193)	25 (0-185)	27 (0-193)	0.938
Median duration of scan to surgery, days (range)	42 (2-349)	42 (3-349)	40 (2-126)	0.126
Median duration of biopsy to surgery, days (range)	53 (0-363)	53 (10-363)	52 (0-245)	0.737

Table 2: Tumor characteristics

	Total n (%)	Pre-COVID period	COVID period	p-value
Total number	137	77	60	
Tumor subsite				
Oral cavity	57	31	26	0.467
Oropharynx	51	30	21	
Sinonasal	12	9	3	
Laryngeal	15	6	9	
Other	2	1	1	
Multidisciplinary tumor board conference recommendation				
Primary Surgery	95	52	43	0.634
Primary radiation therapy	5	2	3	
Primary chemoradiation	26	16	10	
Induction therapy	4	4	0	
Systemic therapy	3	1	2	
Further evaluation	4	2	2	
Tumor (T) classification				
Tx	4	3	1	0.0945
T0	2	1	1	
T1	28	18	10	
T2	35	24	11	
T3	28	14	14	
T4	40	17	23	
Nodal (N) classification				
N0	54	30	24	0.483
N1	42	27	15	
N2	31	16	15	
N3	10	4	6	
Metastasis (M) classification				
M0	134	76	58	0.419
M1	3	1	2	
Median size of primary tumor, longest dimension, cm (range)	3.5 (0.3-9.5)	3.0 (0.3-6.9)	4.5 (0.3-9.5)	0.0001
Median size of largest nodal metastasis, longest dimension, cm (range)	2.1 (0.4-9.0)	2.1 (0.6-7.0)	2.1 (0.4-9.0)	0.780

Results

- There was a 22% reduction of newly diagnosed mucosal HNSCC.
- There was no difference between symptom onset, time to diagnosis, time between biopsy or initial scan to definitive surgery (**Table 1**)
- Median primary tumor size (p=0.0001) was significantly larger during the COVID pandemic
- There was a higher T3/T4 versus T1/T2 proportion during the pandemic (p=0.0244)

Discussion

There was a similar time to diagnosis and definitive surgery, when indicated, for patients that presented with newly diagnosed mucosal HNSCC before and during the early pandemic. During the early pandemic, patients presented with larger primary tumors with a higher proportion of T3/T4 primary tumors. Despite the pandemic, timely care was still rendered for patients with HNSCC.

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