Dental Health in the Head and Neck Cancer Population and the Influence on Time to Initiation of Radiation Therapy

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INTRODUCTION

- Radiation therapy for head and neck cancer negatively impacts dental health.
- Repair or extraction of damaged teeth is ideally performed prior to starting radiation.
- National comprehensive cancer network guidelines recommend initiating post-operative RT within six weeks after surgery.
- Delays in starting primary RT have also been shown to worsen oncologic outcomes.
- The association between access to dental care and time to initiation of radiation remains unclear.

METHODS

- Patients with new diagnoses of head and neck squamous cell carcinoma were included.
- Patients with history of head and neck cancers were included if the current tumor was a new primary.
- Patients were were surveyed in the clinic with tablet computers at the time of diagnosis to assess attitudes, access, and past experiences regarding dental care.
- Additional demographic, tumor and treatment variables were collected from chart reviews.
- The relationship between need for dental care and time to initiation of radiation was assessed using Mann-Whitney U test.
- Radiation delay was defined as time to initiation of radiation of greater than 42 days.

RESULTS

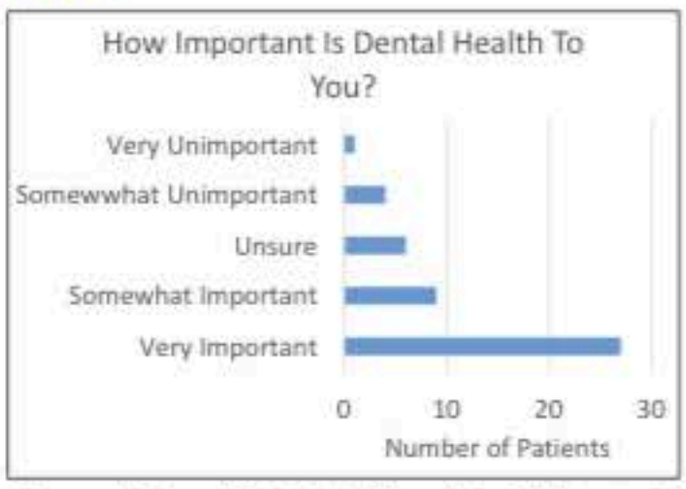

Figure 1: Dental Health Is Valued By A Majority Of Patients

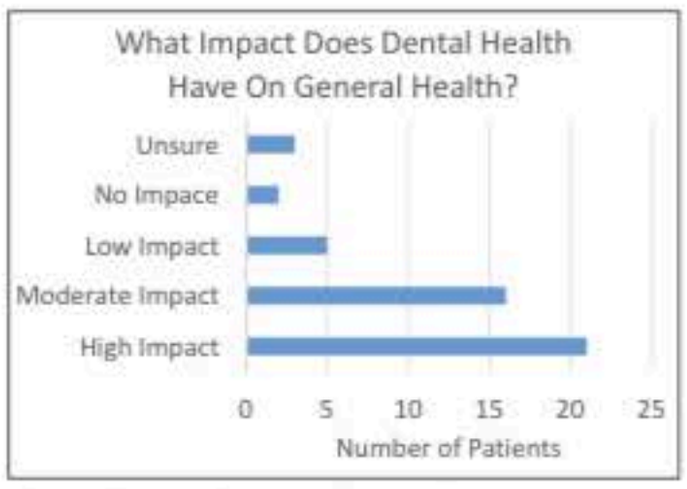

Figure 2: Most Patients Identify The Importance Of Dental Health

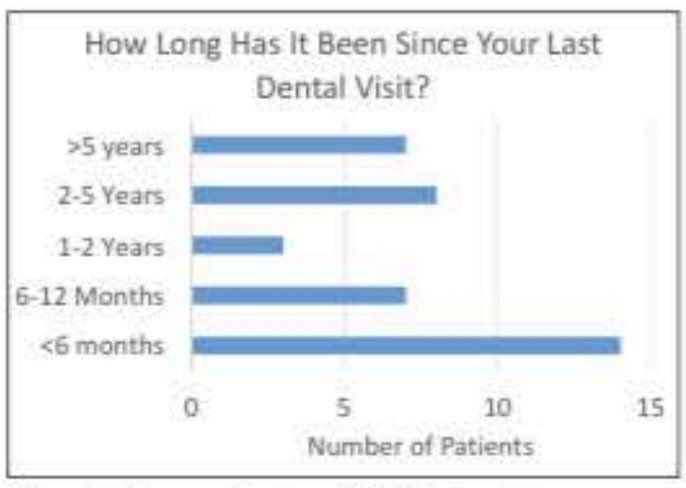

Figure 3: Among Patients With Remaining Dentition, Many Have Not Seen A Dentist In The Last Two Years

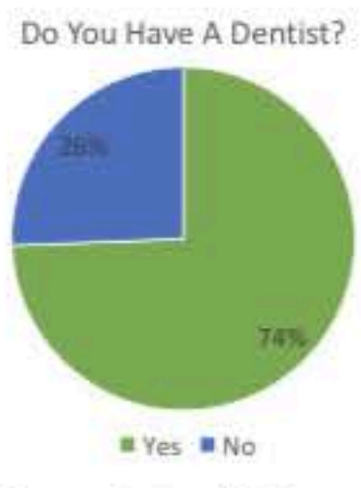

Figure 4: Among Patients With Remaining Dentition, The Majority Have Access To a Dentist

Characteristic	Patients (n=48)
Age (mean (SD))	65.4 (13.89)
Race (n= (%))	
African American	1 (2.1)
Asian American	1 (2.1)
White	46 (95.8)
Sex (n= (%))	
Male	33 (68.8)
Female	15 (31.3)
Smoking Status (n= (%))	
Current Smoker	9 (18.8)
Former Smoker	21 (43.8)
Never Smoker	18 (37.5)
Tumor Site (n= (%))	
Oral Cavity	28 (59.6)
Oropharynx	13 (27.7)
Hypopharynx/Larynx	3 (6.4)
Other	4 (8.5)
T Stage (n= (%))	
1	11 (22.9)
2	13 (27.1)
3	6 (12.5)
4	17 (35.5)
N Stage (n= (%))	
0	22 (45.8)
1	19 (52.1)
2	1 (2.1)
Treatment Modality (n= (%))	
Surgery	32 (66.7)
Radiation	29 (60.4)
Chemotherapy	19 (39.6)
Palliative Care	2 (4.2)

Table 1: Demographic And Tumor Characteristics

Characteristic	Patients (n=48)
Education (n= (%))	
Less Than High School	3 (6.4)
Completed High School	12 (25.5)
Some College	12 (25.5)
Completed College	13 (27.7)
Graduate/Professional School	7 (14.9)
Employment Status (n= (%))	
Full Time	16 (34.0)
Part Time	2 (4.3)
Health Insurance (n= (%))	
Unemployed	29 (61.7)
Commercial	19 (39.6)
Medicare	26 (54.2)
Medicaid	4 (8.3)
Other	15 (31.3)
Uninsured	2 (4.2)
Dental Insurance (n= (%))	
Yes	20 (42.6)
No	27 (57.4)
Household Income (n= (%))	
<40,000	17 (36.9)
40,000-80,000	19 (41.3)
>80,000	10 (21.8)

Table 2: Socioeconomic Characteristics

- Forty-seven patients completed the survey
- RT was recommended for 60.4% of patients, 65.5% of whom needed dental care prior to starting RT.
- One third of patients avoided a dental cleaning or procedure in the previous five years, predominately due to cost or anxiety
- Patients needing dental care before RT had a median time to initiation of RT of 46 days, versus 33.5 days for patients not needing dental care (p=0.103).
- Patients who had access to a dentist at the time of diagnosis were significantly less likely to have a delay in initiation of RT (p=0.010).

DISCUSSION/CONCLUSION

Most patients with head and neck cancer value dental health and recognize its impact on general health. Despite this, access to dental care is often limited, and many patients avoid dental care, often due to cost and anxiety. Needing dental evaluation prior to radiation treatment may delay initiation of therapy, which has been shown to worsen oncologic outcomes. Interventions focused on improving access, helping patients manage cost, and providing education and counseling to reduce anxiety may reduce delays in radiation therapy. These interventions would also likely reduce the incidence of often catastrophic sequelae of untreated dental problems in irradiated patients and may ultimately improve oncologic outcomes. Dental care should be included as an element of a comprehensive head and neck cancer program.

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