ORIGINAL ARTICLE

Head and Neck Cancer Care during the COVID-19 Pandemic in Western India

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Abstract

Objective: To assess the head and neck cancer (HNC) care during the COVID-19 pandemic by studying its demographic, socioeconomic, and clinical parameters.

Materials and methods: All patients diagnosed with HNC who visited the Outpatient Department of ENT and Head and Neck Surgery from April 2021 to March 2022 were included in the study. A proforma was used to collect the demographic, socioeconomic, and data pertaining to their disease in terms of the stage of cancer.

Results: A total of 26 cases received treatment during the study period. More than half the patients had studied only till the 10th standard, and about 46.15% of patients belonged to the lower middle class. Around 53.84% of patients had a delay in surgery, and 46.15% of patients had a delay in postoperative follow-up.

Conclusion: Our study suggests a large number of HNC patients with a delay in cancer care due to the lockdown and restrictions imposed during the pandemic. The low socioeconomic status, coupled with a greater distance from the hospital for many patients, made routine OPD visits and follow-ups difficult, thus upstaging their disease and increasing the associated risks.

Keywords: COVID-19 pandemic, Head and neck cancer, India

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Introduction

The healthcare system was deeply assaulted by the COVID-19 pandemic all over the world. After being reported in the beginning at Wuhan, China, in December 2019, this pandemic has spread extensively, resulting in unprecedented changes to clinical practice. This caused a halt in delivering non-essential or elective in-hospital treatments, which led to an increase in the risk of fearful health complications.[1] Hence, studies were conducted by several authors discussing the plight of cancer patients with respect to their routine follow-up, especially among patients with head and neck cancer (HNC). The risk of contracting COVID infection during daily visits to the hospital for radiation therapy, as well as the risk of infection secondary to chemotherapy-induced immunosuppression, are well known.[2] Moreover, most patients with HNC are elderly and may have other associated comorbidities.[3]

Receiving HNC care regularly, on time, is essential to achieve the best oncologic outcomes since delay in treatment may pose a risk of upstaging or progression of the disease and even lead to death.[4–7]

During the pandemic, there were local authority guidelines that patients receiving posttreatment follow-up or palliative care should stay at home. These were made mandatory in order to avoid any visits to the hospital that are not strictly required. There was also telemedicine support given for post-treatment surveillance for non-essential follow-ups whenever possible.[8]

There is a paucity of data from the Indian perspective, and hence, this study was conducted.

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Aims and Objectives

To assess the HNC care during the COVID-19 pandemic by studying the demographic, socioeconomic, and clinical parameters.

Materials and Methods

The cross-sectional observational study was conducted at a tertiary healthcare center in the Department of ENT & Head and Neck Surgery.

All HNC patients who visit the Outpatient Department of the ENT Department were included in the study.

A standard proforma was used to record data.

The study has received approval from the Institutional Ethics Committee, and consent to participate in the study was obtained from all the study participants with permission to publish the data.

Selection of Cases

- Inclusion criteria: All patients of HNC who visit and are referred to the ENT Outpatient Department of a state-run tertiary care referral center in western India.
- Exclusion criteria: None

This is an observational study conducted in a cohort of patients with HNC treated at a state-run tertiary care referral center in western India between April 2021 and March 2022, and who are referred or primarily diagnosed for oncologic treatment either in the form of surgery, radiotherapy, and/or chemotherapy to this hospital.

Demographic data, socioeconomic status, and cancer staging as per TNM classification were recorded as "early" involving stages I and II and "advanced" for tumor stages III and IV. In addition to this, underlying medical comorbidities, the number of household members, and details whether prevention and control measures like social distancing, wearing masks, etc. were followed or not were also documented. The history of household contact with people who tested positive for COVID infection and delayed cancer care during the lockdown was documented.

The cancer was staged using American Joint Committee on Cancer 2018 guidelines and broadly divided into early (comprising stages I and II) and late (comprising stages III and IV) stages of disease.

Modified Kuppuswamy Socioeconomic scale 2020 was used to study the socioeconomic status of the patients.

Statistical Analysis

For the various categorical variables, counts (n) and percentages (%) were used. Analysis was done using SPSS software version 22.

Results

A total of 26 cases were registered for undergoing head and neck surgery during the study period, as seen in Table 1.

Of these, 23 have undergone surgery. The male:female ratio was 2.25:1. The mean age of the patients was 53 years. Around 57.7% of patients had studied only till the 10th standard. The rest had studied till the 12th standard or pre-university. Around 46.15% of the patients belonged to the lower middle class, and the rest belonged to the upper middle class (53.8%) as per the Modified Kuppuswamy Socioeconomic Scale 2020. Around 73.03% had early-stage cancer, i.e. stages I and II at the time of diagnosis, but at the time of surgery, this was found to be only 30.7%. Around 65.3% of patients had cancer of the oral cavity, which was the most common site. All patients used a face mask, and none had contact with any COVID-positive patients or suffered from COVID infection. Around 53.84% of patients had a delay in surgery, and 1 patient had a delay in laboratory and radiological diagnosis. Three patients had a delay in performing biopsies of the malignant site. Around 53.84% of patients had a reduction in OPD visits, and 46.15% of patients had a delay in postoperative follow-up. Around 42.30% of patients resided in areas that were more than 50 kilometers from the hospital. Of those residing more than 50 km from the hospital, 45.45% belonged to the lower socioeconomic status scale, and 63.6% were educated only till the 10th standard. On average, it took around 17.6 days to operate a case after presentation to the OPD during the pandemic.

Table 1: Demography, socioeconomic status, and details of disease and care received by head and neck cancer patients

S.No.	Age (yr)	Sex	Education level	Socio-economic status	TNM staging (AJCC 2018)	Stage at diagnosis	Stage at surgery	Remarks	Site of malignancy	Delay in surgery	Delay in lab diagnosis	Delay in radiology	Delay in biopsies	Reduction in OPD visits by patient	Delay in post op follow up by patient	Distance from hospital (km)	Time interval between first visit and surgery (days)
1.	53	M	<10th standard	12	T3N1M0	II	III	Operated	Oral tongue	Yes	No	No	No	Yes	Yes	102	23
2.	68	M	<10th standard	20	T3N2M0	IVa	Nil	Not operated	Pyriform fossa	Yes	No	No	No	Yes		112	
3.	57	M	<10th standard	15	T1BN0M0	I	I	Operated	Thyroid	No	No	No	No	No	Yes	33	16
4.	55	M	<10th standard	15	T2N1M0	I	I	Operated	Buccal mucosa	Yes	No	No	No	Yes	Yes	31	26
5.	48	M	10th std to pre university	18	T2N1M0	III	III	Operated	Oropharynx	Yes	No	No	No	Yes	No	120	20
6.	21	M	<10th standard	13	T2N1M0	III	III	Operated	Oral cavity	Yes	No	No	No	Yes	Yes	8	17
7.	36	M	10 Std to pre university	18	T2N1M0	III	III	Operated	Oral tongue	No	No	No	No	No	Yes	67	13
8.	70	M	<10 th standard	11	T3N1M0	II	III	Operated	Oral cavity	Yes	No	No	No	Yes	Yes	245	28

(Contd...)

Table 1: *(Contd...)*

S.No.	Age (yr)	Sex	Education level	Socio-economic status	TNM staging (AJCC 2018)	Stage at diagnosis	Stage at surgery	Remarks	Site of malignancy	Delay in surgery	Delay in lab diagnosis	Delay in radiology	Delay in biopsies	Reduction in OPD visits by patient	Delay in post op follow up by patient	Distance from hospital (km)	Time interval between first visit and surgery (days)
9.	32	F	10th std to pre university	15	T2N1M0	II	III	Operated	Oral tongue	Yes	No	No	No	Yes	Yes	7	18
10.	50	F	<10th standard	12	T3N1M0	II	III	Operated	Oral tongue	Yes	No	No	No	Yes	Yes	21	25
11.	50	M	10th std to pre university	16	T2N1M0	I	III	Operated	Oral cavity	Yes	Yes	Yes	Yes	Yes	Yes	21	23
12.	41	M	10th std to pre university	18	T3N1M0	II	IV	Operated	Oral cavity	Yes	No	No	No	Yes	Yes	10	18
13.	58	F	<10th standard	12	T2N1M0	III	III	Operated	Oral cavity	Yes	No	No	Yes	No	Yes	10	17
14.	48	M	<10th standard	15	T2N0M0	II	III	Operated	Oral cavity	Yes	No	No	No	Yes	No	12	21
15.	51	M	<10th standard	13	T4N0M0	IVa	IVa	Operated	Oral cavity	No	No	No	No	No	No	102	15
16.	73	M	<10th standard	15	T1N1M0	III	III	Operated	Oral cavity	No	No	No	No	No	Yes	80	12
17.	50	M	10th std to pre university	18	T2N0M0	I	II	Operated	Ear	No	No	No	No	No	No	16	15
18.	48	M	10th std to pre university	20	T2N0M0	II	II	Operated	Oral cavity	No	No	No	No	No	No	7	11
19.	71	F	<10th standard	15	T2N0M0	II	II	Operated	Maxilla	No	No	No	No	Yes	No	50	17
20.	71	M	10th std to pre university	18	T3N1M0	II	III	Operated	Oral cavity	No	No	No	N0	No	No	121	13
21.	43	F	<10th standard	20	T2N0M0	I	I	Operated	Thyroid	No	No	No	No	No	No	11	14
22.	51	F	10th std to pre university	20	T2N0M0	II	III	Operated	Maxilla	No	No	No	No	No	No	7	14
23.	58	F	10th std to pre university	18	T2N0M0	II	II	Operated	Maxilla	No	No	No	No	No	No	12	17
24.	65	F	<10th standard	16	T2N2M0	II	II	Operated	Oral cavity	No	No	No	No	No	No	65	12
25.	54	M	<10th standard	20	T2N1M0	I	Nil	Not operated	Oral cavity	Yes	No	No	No	Yes		7	
26.	56	M	10th std to pre university	18	T1N0M0	I	Nil	Not operated	Larynx	Yes	No	No	Yes	Yes		216	

Discussion

On a routine basis, about five cases of HNC are diagnosed in the Department of ENT at Sassoon General Hospital every week. About four cases of cancer are operated on a month apart from other head and neck surgeries for other non-cancer-related cases. Due to the pandemic, particularly during the second wave when this study was conceptualized, it was seen that the attendance of cancer patients in the head and neck OPD was drastically reduced to one per week. Also, this translated to a steep reduction in the number of surgeries done, as mentioned in the results. Due to the restrictions imposed as a result of the lockdown, many cancer patients could not get access to their doctors, and as a result, diagnosis and surgery were delayed. Due to this, the stage of the disease progressed from the point of diagnosis to the point of surgery, leading to morbidity. Although we have no deaths in the present study, we have seen a reduction in the frequency of OPD visits of these patients and also a fall in the postoperative follow-up. Since many patients belonged to the lower middle class and were not well educated, they were mostly relying on daily wages for their income. These patients relied on public transport facilities, which were halted during the pandemic wave. The above issues have brought about considerable fear and anxiety amongst the cancer patients as they have been kept away from being diagnosed and treated in time. Also, the availability of manpower in the hospital during the pandemic is of considerable concern as the majority of the doctors, irrespective of their specialty, were busy catering to the surge in COVID cases.

Conclusion

Our study highlights the large proportion of HNC patients with delayed cancer care due to curbs imposed during the pandemic. The low socioeconomic status, coupled with a greater distance from the hospital for many patients, made routine OPD visits and follow-ups difficult, thus upstaging their disease and increasing the associated risks. Policies should have been implemented by the authorities to look into non-communicable diseases, such as cancer care, and follow-up as a priority during the pandemic, and also strengthen the possible use of telemedicine for managing patient issues to some extent. Isolating COVID care facilities and letting other essential hospital services run would help in avoiding delays in surgery. Still, none of the patients succumbed and are on regular follow-up. However, the difficulties encountered by cancer patients are a matter of concern and warrant a study like this to address the same in order to be prepared for the future.

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