



OPERATING ON HEAD AND NECK CANCERS DURING COVID-19 PANDEMIC: OUR EXPERIENCE IN A TERTIARY CARE SURGICAL ONCOLOGY CENTER IN CENTRAL INDIA

Oncology

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ABSTRACT

WHO declared the COVID-19 outbreak to be a global pandemic on March 11, 2020. We hereby present the ongoing challenges, and the protocol and algorithms followed by us right from diagnosis, surgery and follow up of 50 head and neck cancer patients during the time of covid-19 pandemic at a tertiary care center in central India. Of the 50 head and neck cancer patients operated we had 16(32%) Ca buccal mucosa cases, 13(26%) cases of ca lower alveolus, 9 (18%) ca tongue cases, 5 (10%) ca maxilla, 3 (6%) ca larynx, 2 (4%) ca lip and 2 (4%) ca thyroid cases. It is prudent to consider every patient as covid carrier as community spread has already occurred in our country and take necessary precautions while examining all patients. Cancer Management is semi-emergency. The precautions taken by us are considered to be standard and have allowed us to perform head and neck cancer surgeries safely in this Covid-19 pandemic.

KEYWORDS

Head and neck cancer, oral cancer, covid-19, safe surgery, surgical oncology

INTRODUCTION:

WHO declared the COVID-19 outbreak to be a global pandemic on March 11, 2020.¹ The speed and scale of the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has resulted in unprecedented pressures on health services worldwide.²⁻⁴ The need for hospitalisation and mechanical ventilation in intensive care for considerable proportion of patients, in addition to staff shortages due to illness and concerns of viral transmission to health-care workers and other patients, have led to a severe curtailment of health-care capacity and resources. In India, as of now, > 8.09 million people are confirmed to be infected, and > 121000 have died because of COVID-19.

We hereby present the ongoing challenges, and the protocol and algorithms followed by us right from diagnosis, surgery and follow up of 50 head and neck cancer patients during the time of covid-19 pandemic at a tertiary care center in central India.

METHODOLOGY:

In our surgical oncology opd, examination of patients with oral cancer was done using standard surgical gloves, N 95 face mask and face shield. Diagnosis was confirmed with biopsy under local anaesthesia for all patients and procedure was performed using PPE (Personal Protective Equipment) kit. After admission, patients were kept in a waiting area and nasopharyngeal and oropharyngeal swabs were taken and run for COVID-19 test with RT PCR. All Patients with COVID-19 negative test were admitted for surgery. Those patient who turned out to be covid positive were treated accordingly in Covid ward and planned for surgery after treatment and being COVID negative.

We have operated on 50 head and neck cases in covid era using mmpl personal protecting system which consists MMPL helmet system with front airflow redirected to reduce eye dryness with hood consisting of large anti-fogging face mask with clear visual field, hence it is easy to operate with precision.



Fig1: Helmet system



Fig 2: Helmet with Hood for operating on head and neck cancer patients.

RESULTS:

Of the 50 head and neck cancer patients operated we had 16(32%) Ca buccal mucosa cases, 13(26%) cases of ca lower alveolus, 9 (18%) ca tongue cases, 5 (10%) ca maxilla, 3 (6%) ca larynx, 2 (4%) ca lip and 2 (4%) ca thyroid cases. All were diagnosed with preop biopsy as Squamous cell carcinoma and two thyroid cancers were papillary Ca(FNAC).

In this study of 50 head and neck cancer patients, there was male predominance with 35 male patients (70%). The recorded age of the patients in the study ranged from 22 to 76 years.

Majority of Ca buccal mucosa(10 cases) underwent hemimandibulectomy /segmental mandibulectomy in view of lower GBS (gingivobuccal sulcus) involvement out of which 4 also had to undergo superior alveolectomy for upper GBS involvement as well for margin clearance. Rest 5 cases were early cancer hence treated with WLE(wide local excision) with either submental or platysmal flap closure. All (10 cases) ca lower alveolus were treated with either hemimandibulectomy/Segmental mandibulectomy while 3 had involved central arch so underwent central arch segmental mandibulectomy with tracheostomy. Out of the 9 ca tongue cases, 4 had extensive disease involving anterior 2/3rd as well as posterior 1/3rd hence underwent total glossectomy with visor approach and tracheostomy. Remaining 5 cases underwent partial or hemiglossectomy. All 5 ca maxilla cases underwent infrastructural maxillectomy. Out of the 3 ca larynx cases, one underwent total laryngopharyngectomy and 2 underwent total laryngectomy with permanent tracheostomy. Both ca thyroid cases underwent total thyroidectomy with central neck node dissection. Both ca lip cases

were involving less than 1/3rd of lower lip and underwent WLE with primary closure.

Majority of cases about 42 cases out of 50 were T3-T4 disease compared to 8 cases of early T1-T2 disease. Locally advanced disease is more in our country as a result of poor socioeconomical status and self neglect.

DISCUSSION:

It is prudent to consider every patient as covid carrier as community spread has already occurred in our country and take necessary precautions while examining all patients. According to recommendations⁵, in covid era, a positive cytohistological result from fine needle aspiration or core biopsy of a suspicious node and suspicious imaging together are acceptable confirmations of a cancer diagnosis, even in the absence of a biopsy of the primary tumour site; however we have taken punch biopsy from primary tumour site with due precautions of all oral cancer patients and have done cect/mri neck for all patients undergoing surgery.

Categorisation of procedures:

Daycare procedures or short procedures for T1–T2 cancers that do not warrant reconstruction or tracheostomy with a short hospital stay have been advised⁶⁻⁸. However in our institute we have operated majority of T3-T4 cases (42 out of 50 cases (84%)) (locally advanced disease) who benefit from curative-intent therapy while taking adequate precautions against exposure.

Emergency procedures such as tracheostomy for stridor and control of bleeding (carotid artery ligation) are recommended in all situations. We have performed 4 emergency tracheostomies for locally advanced Ca larynx and sent for definitive radiation therapy and have performed external carotid artery ligation for 2 cases of bleeding recurrent ca tongue.

Those patients with head and neck cancers who have been found to have COVID-19 positive in RT-PCR were deferred and sent for COVID care. It has been found that a delay of up to 30–37 days does not have any impact on outcomes.⁹⁻¹¹

COVID-19 Impact:

During the current COVID pandemic with resource allocation for COVID-19 patients (doctors, nurses, paramedical staff, intensive care unit beds, ventilators, and funds), this waiting period would be substantially longer.^{12,13} Hence, the risk of progression of disease during this waiting period is also significant and needs consideration. To counter this, one can use the strategy of neoadjuvant chemotherapy (NACT). In two Phase III randomized studies, the use of NACT failed to improve outcomes.^{14,15} However, both studies did show that outcomes with NACT were non-inferior to the standard treatment. The 10-year overall survivals were numerically higher in the NACT arm (46.5% vs. 37.7%; $P = 0.3402$; [HR] = 0.837).¹⁶ Thus, the use of NACT would help in delaying surgery and avoid the risk of progression.

Policies for Follow Up:

Normally in pre-covid era we had fixed follow up protocols for operated head and neck cancer patients, every monthly for 1st year, every 3 monthly for next 2 years, every 6 monthly for next 2 years (5 years follow up) and all patients were seen in surgical oncology opd. However in post-covid era routine we are mainly doing routine follow up by telephonic conversation and hence minimising contact with each operated patient and follow up policy of opd visit every monthly have been converted to 3 monthly OPD visit and frequent visit only in case of emergency or any other complications requiring surgical care.

According to recommendations⁵, in routine patients with head and neck cancer 3 months or more after surgery, there was strong agreement (80.0%) on monitoring follow-up through video or phone consultations, with face-to-face review only in the case of suspicious findings. There was also agreement (70.0%) that it is appropriate to combine routine face-to-face and video or phone consultations.

However, there was no agreement (47.5%) that video or phone consultations alone is an appropriate method of follow-up for these patients. There was strong agreement (100.0%) that it is not appropriate to stop follow-up altogether. There was also agreement

(67.5%) that the normal frequency of follow-up should be maintained. Post Operatively our patients were sent for adjuvant treatment (radiation or concurrent chemoradiation) according to routine NCCN guidelines.

CONCLUSION:

Cancer Management is semi-emergency. A delay in treatment will gravely impact survival. Hence it is important to individualise treatment and take proper precautions for outpatient care, operating on head and neck cancer cases and also for follow up of these patient. The precautions taken by us are considered to be standard and have allowed us to perform head and neck cancer surgeries safely in this Covid-19 pandemic.

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