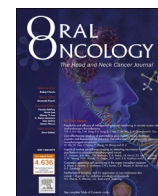




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Letter to the editor

8 “S” of obturators in Head and Neck Cancer Rehabilitation during COVID-19 pandemic

To the editor,

Head neck ablative surgeries leave the patient with multiple functional incapacibilities particularly concerning speech, swallow, mastication, and facial appearances [1]. Prosthodontic treatment paradigms have led to better outcomes for patients with head and neck cancers (HNC). Due to the current COVID-19 pandemic scenario, there have been recent changes in the head and neck reconstructive practice. There is a decrease in complex head and neck reconstructive surgeries using free flaps and increased use of local and pedicled flaps for major ablative maxillofacial defects [2–5]. To tide over the urgent crisis of rehabilitation palatal obturators (from the Latin word *obturare*, meaning “to close up”) could be an immaculate fit for many HNC patients during this pandemic. Rehabilitation with an obturator aims to restore the separation between the oral and nasal cavities, enable the patient to swallow, maintain or provide mastication, sufficient occlusion and mandibular support, support the soft facial tissues, re-establish speech and restore an aesthetically pleasing smile. A recent systematic review by Cao et al concluded that both obturators and flaps are effective in rehabilitating the HNC patients and in assisting them to regain their life. Also, they noticed in several included studies no significant differences were found in various parameters, even when obturators were used in several larger defects [6]. The advantages and disadvantages of the obturators compared to autogenous tissue reconstruction are listed in Table 1. We hope this letter will be particularly helpful to surgical residents, prosthodontists, and maxillofacial specialists to easily remember the simple handy solution available to them for providing better clinical care and counseling to the HNC patients amidst the pandemic.

Advantages:

The oral surgeons are especially vulnerable to the COVID-19 infection due to their extensive and close exposure to patients’ oral and nasal cavities and secretions. Shorter operative surgery reduces the contact duration and benefits both the patient and the surgeon [3–5,7]. To reduce the risk of contamination of exposed mucosa postop the obturators can also be used as a stable matrix for surgical packing of the cavities immediately after the tumor resection. Microsurgical reconstructions often require long-standing patient monitoring in intensive care units, which may not be currently available due to the pandemic. Hence, several head and neck surgery services have prioritized less these types of complex free-flap reconstructions, primarily avoiding the longer surgical time and decreasing the hospital stay primarily with use of obturators [2,8]. Due to the re-establishment of oral function immediately after surgery, there will be better pain control and improvement in nutritional status and weight gain. Also, the usage of obturators eases the professional workflow of head and neck surgeons, radiotherapists, and rehabilitation teams.

Simplified oncological surveillance is the greatest advantage of the obturator. The surgical site can be easily visualized after removing the

prosthesis and any suspicious lesion may be detected early by the patient himself thereby avoiding frequent visits to the hospital for routine clinical and radiological examinations during the pandemic [2,6,8,9]. For small and few medium-sized defects, immediate rehabilitation in the form of an obturator might not be necessary. After completion of any adjuvant therapy and wound healing the defect can be re-assessed. Typically, the size of the defect would have considerably reduced, and the need for obturation might have been obviated. This flexibility in chronologic decision making and reduced initial contact with the maxillofacial prosthodontist are further advantages with obturators during this COVID pandemic.

Probable Disadvantages:

During best evidence synthesis (BES) of published literature, Cao et al found that flaps were advantageous when patients spoke single words, but other problems such as hypernasal and unintelligible speech caused by maxillary ablation could be solved in the same way by flaps or obturators. Though prosthetic obturators might be related to increased leakage (regurgitation) when swallowing foods and hypernasality during the speech, probably due to decreased velopharyngeal closure, no similar evidence could be found during BES. Also, there was no significant influence on the perception of appearance, patients’ social activities, recreation, and depression by either mode of rehabilitation [6]. Strict hygiene requirement during usage of obturators is mandatory to prevent the risk of oral infections and bacteremia. People who use palatal obturators must be monitored regularly by their prosthodontist to ensure the continued effectiveness and comfort of the prosthesis. At times secure fit may not be possible due to the progressive changes in size and shape of the cavity.

We should also remember the cases where using the obturator may not be feasible, these include patients with trismus, oral submucous fibrosis, limited stable dentition for placing the obturator, and overlying skin defects. Despite these limitations, well-designed obturators can still be used in the vast majority of patients.

Complex head and neck reconstructive surgeries burden healthcare workers amidst the COVID-19 pandemic with little benefit to the patient. It is time for all maxillofacial surgeons, patients, and prosthodontists to reconsider the optimal use of obturator prosthesis as a routine rehabilitation tool. We strongly believe palatal obturators can quickly return the functional aspects of complex maxillofacial defects following intraoral cancer resection, and also improve the psychological and quality of life outcomes of the patient [2–6]. By the strategic alteration of the rehabilitation protocol, many HNC patients can receive timely necessary cancer care and avoid the need to go through long hospitalization, frequent follow-up visits which at present seems to be the optimal scientific-based approach.

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Table 1

Favorable features of obturators in Head and Neck Cancer Rehabilitation during COVID-19 Pandemic.

Advantages	Probable Disadvantages ⁱ
Shorter operative time	Speech Problems
Stable matrix for packing	Swallowing Problems
Short hospital stay	Strict hygiene requirement
Simplified Oncological Surveillance	Secure fit issues

ⁱ These can be managed by using well-designed obturator prostheses and the literature evidence is scarce [6].

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Author's contribution

PS and AM – Design and drafting of manuscript, acquisition of information. PS, SP and MD – editing, literature review, critical revisions. All authors read and approved the final version of the article.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Pirabu Sakthivel^{*1}

Department of Otorhinolaryngology and Head-Neck Surgery, KMCH
Institute of Health Sciences and Research, Coimbatore 641014, India

Akshat Malik²

Department of Surgical Oncology, Max Institute of Cancer Care, Saket, New
Delhi 110017, India

Smriti Panda

Department of Otorhinolaryngology and Head-Neck Surgery, Teaching
Block, All India Institute of Medical Sciences, New Delhi 110029, India

Muthuswamy Dhiwakar

Department of Otorhinolaryngology and Head-Neck Surgery, KMCH
Institute of Health Sciences and Research, Coimbatore 641014, India

^{*} Corresponding author at: Department of Otorhinolaryngology and
Head-Neck Surgery, Kovai Medical Centre Hospital, Room Number: 10,
99, Avinashi Road, Coimbatore 641014, India
E-mail address: pirabusakthivel@gmail.com (P. Sakthivel).

¹ The author equally contributed to the article.

² The author equally contributed to the article.