



Role of oral and maxillofacial surgeons in treating oral cancer

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Oral cancer is a malignant neoplasm that affects the lips, buccal mucosa, gingiva, floor of the mouth, hard palate, and anterior two-thirds of the tongue. Approximately 90% of malignant lesions of the oral cavity are squamous cell carcinomas (SCCs), and two-thirds of these cases occur in developing countries. The incidence of oral cavity cancer in South Korea gradually increased from 2017 to 2021 according to the Healthcare Bigdata Hub. Approximately two hundred thousand people are diagnosed with oral cavity cancer annually. Previously, in South Korea, the proportion of men affected was almost twice that of women, but this discrepancy in the incidence between the sexes has gradually decreased¹.

Early detection and diagnosis are important steps in the treatment of oral cancer. They affect perioperative surgical planning, such as determining the extent of tumor excision needed to obtain clear margins and the method for surgical defect reconstruction. These steps also impact the postoperative recovery of patients, adjuvant therapy, including radiotherapy and chemotherapy, and patient quality of life. General dental clinics can refer the patient to a local oral and maxillofacial (OMF) clinic on suspicion of a malignant lesion for further diagnosis. Malignant neoplasms of the oral cavity can be easily detected and quickly diagnosed by OMF surgeons and pathologists². Regular oral examination and early detection of pre-malignant and malignant lesions are significant factors related to postoperative prognosis and overall survival rate³. Early clinical diagnosis can be performed effectively by

dentists and OMF surgeons.

The surgical goal for oral cancer is to histologically secure clear, tumor-free margins. A clear margin can be defined as a distance of 5 mm or more from the resection margin to the tumor, and is essential to diminish the risk of locoregional recurrence⁴. OMF surgeons understand the anatomy, structure, and function of the oral cavity. They are familiar with the peroral and intraoral approach, which has been used in various OMF surgeries. Early-stage oral SCCs can be adequately treated with wide excision without lip split or mandibulotomy, and an adequate tumor-free margin can be secured using an intraoral surgical approach. Understanding the oral cavity environment and accessibility of the intraoral approach is critical to less invasive and definitive treatment of oral cavity cancer through primary tumor resection and reconstruction. A clinical trial was performed by an OMF surgeon for microvascular reconstruction of the mandible using the intraoral anastomosis technique⁵.

Oral defects after tumor excision should be reconstructed considering dental rehabilitation, oropharyngeal function, and facial esthetics. In particular, for adequate dental and occlusion rehabilitation, preoperative treatment planning and functional reconstruction should be based on evaluations by OMF surgeons. Currently, computer-assisted surgery, virtual surgical planning, and three-dimensional surgical guides are widely used in clinical practice. With the advancement of these technologies, OMF surgeons can preoperatively plan the resection margin while preserving important anatomical structures, ensuring functional reconstruction to establish a stable dental occlusion⁶. Placing dental implants with fibula free flap reconstruction after segmental mandibulectomy can contribute to prosthetic dental rehabilitation and is a crucial part of oral cancer treatment².

A multidisciplinary approach is needed for comprehensive care of patients with oral cavity cancer, including OMF surgeons, plastic surgeons, otolaryngologists, radiation on-

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cologists, hematology oncologists, prosthodontists, general dentists, and speech-language pathologists. OMF surgeons have a good understanding of the oral anatomy and function and can provide definitive management of primary tumor resection, functional reconstruction, and postoperative care, including surveillance and dental rehabilitation. OMF surgeons are qualified to lead a multidisciplinary team and play a crucial role in the comprehensive care of oral cancer, including early diagnosis, surgery, adjuvant therapy, and dental rehabilitation.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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