Oropharyngeal and Oral Cavity Cancer Surgical Practice Guidelines

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The Society of Surgical Oncology surgical practice guidelines focus on the signs and symptoms of primary cancer, timely evaluation of the symptomatic patient, appropriate preoperative evaluation for extent of disease, and role of the surgeon in diagnosis and treatment. Separate sections on adjuvant therapy, follow-up programs, or management of recurrent cancer have been intentionally omitted. Where appropriate, perioperative adjuvant combined-modality therapy is discussed under surgical management. Each guideline is presented in minimal outline form as a delineation of therapeutic options.

Following each guideline is a brief narrative highlighting and expanding on selected sections of the guideline document, with a few relevant references. The current staging system for the site and approximate 5-year survival data are also included. The Society does not suggest that these guidelines replace good medical judgment. That always comes first. We do believe that the family physician, as well as the health maintenance organization director, will appreciate the provision of these guidelines as a reference for better patient care.

Society of Surgical Oncology Practice Guidelines: Oropharyngeal and Oral Cavity Cancer

Symptoms and Signs

**Early-stage disease**

- Persistent sore in the oral cavity
- Swallowing difficulty
- Lesion discovered as an incidental finding on routine oral examination
- Pain and ulceration in the mouth

**Advanced-stage disease**

- Pain, especially referred to the ear
- Slurred speech
- Difficulty in swallowing
- Neck mass
- Trismus

Evaluation of the Symptomatic Patient

Work-up
- Examination of the head and neck, oropharynx
- Flexible laryngoscopy
- Punch biopsy in the office
- Biopsy, followed by examination under anesthesia to determine the stage and extent of the disease, if office evaluation is unsatisfactory

**Appropriate timeliness of surgical referral**

- Follow evaluation as described above (in patients having symptoms or signs of early or advanced disease as soon as possible)

**Preoperative Evaluation for Extent of Disease**

- Physical examination
- Laryngoscopy
- Chest x-ray
- Panoramic x-ray of the mandible
- CT scan of head and neck

**Surgical Considerations**

**Early stages**

- T1 and T2 lesions of the oropharynx (base of the tongue, tonsillar fossa, soft palate, pharyngeal wall) should be treated with radiotherapy or surgery
- Most T1 and T2 tumors of the oral cavity should be treated with surgery.

**Advanced stages (III and IV)**

- Multimodality therapy indicated. Most T3 and T4 lesions should be treated with planned surgery and radiation, with emphasis on primary reconstruction. T3 exophytic tumors may be treated with radiotherapy alone.
- Surgical approach and exposure may be difficult.
- External radiation therapy coupled with interstitial implant (brachy-therapy) to the base of tongue has shown control rates equal to those of surgery. Appropriate selection is very important.

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Approximately 39,750 new patients with tumors of the oral cavity (encompassing the lip, buccal mucosa, alveolar ridge and retromolar trigone, anterior two thirds of the tongue, hard palate, and floor of the mouth) or oropharynx (including the base of the tongue, tonsillar pillar and fossa, and soft palate) are seen every year, and 8,440 patients die from these cancers. However, tumors of the oral cavity alone are diagnosed in approximately 19,000 individuals and account for 4,200 deaths. The tongue is the most frequent site of tumor in the oral cavity, with an incidence of 5,550 patients per year.

The most common etiologic agents are smoking and alcohol. Consumption of betel nuts, which is very common in Southeast Asia, especially India, has also been implicated. Other possible etiologic agents include chronic irritation, ill-fitting dentures, and a history of syphilis. The most common symptom related to cancer of the oral cavity is persistent soreness. In other cases, such a lesion is found incidentally on routine oral examination. Pain referred to the ear, slurred speech, difficulty in swallowing, a neck mass, or occasionally in advanced cases, trismus, are also clues to the diagnosis.
The work-up of a patient with a suspected oropharyngeal or oral cancer includes a complete head and neck examination. Biopsy of a suspicious lesion can be performed under local anesthesia. Preoperative evaluation should include indirect laryngoscopy and a chest x-ray. A CT scan is indicated only for evaluation of an extensive cancer.

**Staging**

The TNM staging system is routinely utilized for cancers of the oral cavity and oropharynx (Table 1). The T-stage describes the greatest dimension of the tumor, with T1 being less than 2 cm; T2, between 2 and 4 cm; and T3, greater than 4 cm. The T4 designation denotes tumor invading the adjacent structures, extending through the soft tissues or cortical bone. Nodal staging is as follows: N1 denotes ipsilateral lymph node metastasis less than 3 cm in greatest dimension; N2, 3 to 6 cm; and N3 greater than 6 cm. The presence of N2 or N3 disease indicates advanced-stage disease (stage IV).

Survival is excellent in early-stage disease, between 75% and 95%. However, in advanced-stage disease, survival decreases considerably, to between 35% and 50%. T-staging of oral cavity cancer is quite easy. However, T-staging of oropharyngeal tumors, especially tumors of the base of the tongue, may be quite difficult. Some of these tumors may have considerable submucosal extension and may be difficult to evaluate.

**Treatment**

Early (T1 and T2) lesions of the oral cavity can be easily treated with surgery alone with little loss of function and good long-term control of the cancer. Surgery may include marginal or segmental mandibulectomy, depending on disease extent and proximity of the tumor to the mandible. If the mandible is directly invaded by tumor, segmental mandibulectomy is generally required. Elective neck dissection is generally indicated for T2 cancers.

The surgical approach and exposure to the oropharynx may be quite difficult. T2-T3 tumors of the tongue base can be effectively treated with external radiation and interstitial implantation. Advanced tumors of the oral cavity have a much poorer control rate regardless of the treatment employed. Multimodality treatment, including surgery and radiation therapy, is commonly used in stage III and IV cancers.

Quality-of-life issues are very important in patients with tumors of the oral cavity, especially those with advanced-stage disease. Problems related to speech, swallowing, and mandibular reconstruction are extremely critical. Microvascular free mandibular reconstruction with either fibular or iliac crest grafts has improved cosmetic results considerably. However, functional results are still quite limited. Patients with advanced cancer of the base of the tongue may require not only a subtotal glossectomy but also a total laryngectomy in order to avoid problems related to persistent aspiration.

Postoperative radiation therapy is usually reserved for patients with advanced cancers of the oral cavity. However, it may create problems related to osteoradionecrosis and dryness of the mouth.

**References:**


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