

CA

**Early Diagnosis and Treatment
of Head and Neck Cancer***John M. Loré, Jr., MD*

This issue of *CA* features articles on early diagnosis and treatment of head and neck cancer,^{1,2} providing an overview of the many issues involved in the management of these tumors.

In a comprehensive article, Mashberg and Samit¹ describe important concepts regarding the early detection of oral and oropharyngeal cancers, especially relative to mucosal changes. It is important to note surrounding edema, puffiness, and bulging mucosa in evaluating the extent of a tumor. The authors' suggestion to discard the term "leukoplakia" is well taken. Describe what you see—color and other characteristics of the mucosa. They rightly point out that white areas are often candida, lichen planus, or scarring (cancer may be coexistent). Erythema can either be precancerous (erythroplasia) or inflammatory—obviously a very important distinction that must be determined by biopsy.

The use of toluidine blue is strongly supported for early detection and as a guide for optimal biopsy. However, it is important to know the limitations of this procedure.

Detection of neoplasms of the palatine tonsils or base of tongue can often prove to be very illusive. The only clinical symptom or sign may be a mass in the

neck, usually subdiaphragmatic or jugulodigastric. In this case, if a primary cannot be detected, an examination under general anesthesia is a must. The problem with these sites (as well as the nasopharynx and pyriform sinus) is that the tumor can be minute and hidden in the crypts of lymphoid tissue or folds of overlying mucosa on the lateral margins.

At times the suggestion of fullness or mass is present, but nothing abnormal is seen. Biopsy can often be performed using the examining finger as a guide to the suspicious fullness or mass. If this fails, a fine-needle aspiration can be done for a mass at the base of the tongue with intact mucosa, e.g., with an adenosquamous cell carcinoma or a malignant minor salivary gland tumor. If the suspect area is in the palatine tonsil and biopsies fail, a tonsillectomy should be performed, preferably with frozen section.

A high-grade mucoepidermoid carcinoma of the mobile tongue may be suggested by a very small, painful, and tender fissure or small ulcer over a large, deep, infiltrating mass. The tenderness indicates perineural invasion, an ominous finding.

Submucosal masses with intact overlying mucosa anywhere in the upper respiratory tract may be tumors of minor salivary glands. The rate of malignancy ranges from seven percent to 82 percent.³ In these cases, if fine-needle aspiration does not yield a diagnosis, a wide excision should be performed to obtain material

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for frozen section. If the cancer diagnosis is certain, ablative surgery should be performed at the same time.

A complete head and neck examination should be performed for any persistent complaint, even if just a vague sore throat or ear discomfort. Unsuspected, asymptomatic, malignant lesions may be detected.

Both articles emphasize palpation in the evaluation of extent, induration, and depth of infiltration of a neoplasm. This modality is extremely important. As with inspection, palpation can aid in evaluation of any asymmetry when compared with the normal side.

Both articles are also correct in stressing the need for proper use of illumination, mirrors, and optical endoscopy in a head and neck examination. Rigid scopes, however, are necessary for biopsies of the larynx and hypopharynx (although flexible or curved forceps with telescopic optics can be used in selective lesions) as well as for tattooing the extent of the neoplasm when preoperative chemotherapy is used.

Shah and Lydiatt² provide an all-inclusive, well-done article on treatment of head and neck cancer. The five-year survival rate of "around 50 percent for all sites and stages" and the five-year survival rate of 35 percent for stage III and IV cancer (larynx, hypopharynx, and oral cavity) reported by the Head and Neck Contracts Program⁴ indicate there is much to look at, reevaluate, and improve upon. This is especially true for the current "so-called" basic treatment for advanced carcinoma using modified surgery and postoperative radiotherapy. This treatment has not been evaluated with controlled protocols. Readers are referred to thoughtful reviews by Schuller⁵ and Goodwin⁶ of an article related to this subject.

In a recent study using preoperative chemotherapy in 88 consecutive cases (nonrandomized, resectable, untreated stage III and IV), there was an estimated

five-year survival rate of 55 percent.⁷ The forty patients in the arm with cisplatin and 5-fluorouracil had a five-year survival rate of 76 percent. Early postoperative selective radiotherapy was only used in eight patients, while 12 patients received late radiotherapy for recurrent local disease, selective secondary metachronous primaries, and selected distant metastasis.⁸ Resection of the primary disease encompassed the original margins prior to any response to chemotherapy.

Another important topic involves the initial management of a neck mass that has even the slightest possibility of being metastatic carcinoma. Incisional or excisional biopsy of the neck mass should not be performed initially. First, a complete head and neck examination is done with imaging. If a primary is not detected, examination under general anesthesia and a general physical examination should come next. Fine-needle aspiration should be performed to evaluate a possible primary lesion of the head and neck. If no diagnosis is obtained, then and only then should incisional or excisional biopsy of the neck mass with frozen section be performed. If open biopsy alone is done initially, the neck is violated, and there is potential spread of metastatic carcinoma as well as a possible missed primary.

A hypopharyngeal primary usually has a poor prognosis, which is worse when the larynx is involved. In this scenario, total laryngectomy and total hypopharyngectomy are suggested over an attempt to preserve a small strip of posterior hypopharynx to reconstruct the pharyngeal defect. Reconstruction can be easily achieved with the posterior tongue flap with a dermal graft or a pectoralis major myocutaneous flap with dermal graft.⁹

Shah and Lydiatt² are correct in stating that selective or functional neck dissection based on the site and T classification of a primary requires further study at this point. It must be emphasized that often there is no correlation between the

size of the primary and the size and extent of the nodal disease. The location of metastasis to the neck does not always follow a predicted pattern. The entire concept of these types of neck dissection and their current indications, including the N0 neck, and the part played by routine postoperative radiotherapy requires careful scrutiny because neck metastasis is one of the foremost factors in the failure of treatment for head and neck cancer.

Limiting the surgery in the neck must be carefully considered. Beautiful anatomic dissections are certainly feasible, but microscopic disease may still be present. Surgeons who support selective neck dissections may advocate postoperative radiotherapy. Remember the short- and long-term complications of radiotherapy. Are they any less or more than the sequelae of a well-performed radical neck dissection?

In a recent study using techniques of molecular biology, Brennan et al¹⁰ showed that for 25 patients with histologic negative margins, 13 patients had posi-

tive margins with *p53* tumor suppressor gene analysis. Of these 13 patients, five had local recurrence. In addition, molecular biology studies demonstrate that mutation of the *p53* gene in squamous cell carcinoma correlates with the habits of smoking and drinking.¹¹ The future use of molecular biology in diagnosis, prevention, and management of head and neck cancer is very encouraging.

Shah and Lydiatt² appropriately conclude that continued research in early detection and multimodality treatment is essential to improve prognosis in head and neck cancer. In addition, it is also suggested that improved outcome may well be enhanced by restraint of dabblers in head and neck oncology¹² and an emphasis on the responsibility of organized medicine to train well-qualified head and neck oncologic surgeons.¹³ A further enhancement may be the formation of head and neck centers of excellence both in community and university hospitals to emphasize and improve the quality of care.

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