

Appendix II

Surgery Guidelines

Resectable versus Unresectable Disease

The various site-specific guidelines pertain to patients with resectable disease. The management of patients with locally advanced unresectable disease, metastatic disease, or recurrent disease is dealt with in the Advanced Head and Neck Cancer section.

The term “unresectable” has resisted formal definition by head and neck cancer specialists for decades. No definition of surgical unresectability meets with universal approval. Most surgeons consider a patient's cancer unresectable if they doubt their ability to remove all gross tumour on anatomic grounds or if they are certain local control will not be achieved after an operation (even with the addition of radiotherapy to the treatment approach). Typically, such tumours densely involve the cervical vertebrae, brachial plexus, deep muscles of the neck, or carotid artery. Although local and regional disease may be surgically treatable, patients with distant metastases are usually treated as though the primary tumour were unresectable.

Distinctions should be made between unresectable tumours (i.e., those tumours unable to be removed without imposing unacceptable morbidity) and those tumours in patients whose constitutional state precludes an operation (even if the cancer is readily resected with few sequelae). Additionally, there is a subgroup of patients who refuse surgical management due to patient preference issues. These tumours should not be considered unresectable.

Thus, patient choice or a doctor's expectations regarding cure and morbidity influence or determine treatment. Patients with resectable tumours who may also be adequately treated without an operation represent a very important group. Definitive treatment with radiation therapy alone or in combination with chemotherapy may represent an equivalent or preferable approach to resection in these individuals. Although such patients may not undergo surgery, their tumours should not be considered unresectable. Their disease is usually far less extensive than disease which truly cannot be removed.

Cervical Lymph Node Dissections:

Historically, cervical lymph node dissections have been classified as “radical” or “modified radical” procedures. The less radical procedures preserved the sternocleidomastoid muscle, jugular vein and/or spinal accessory nerve. Currently, it is preferred to consider cervical lymphadenectomy differently, classifying cervical lymph node dissections as either “comprehensive” or “selective.” A comprehensive neck dissection is one that removes all lymph node groups which would be included in a classic radical neck dissection. Whether the sternocleidomastoid muscle, jugular vein or spinal accessory nerve is preserved does not affect whether the dissection is comprehensive.

Selective neck dissections have been developed based on an understanding of the common pathways for spread of head and neck cancers to regional nodes (Byers, 1991; Stringer, 1995). A supraomohyoid neck dissection is designed to remove the nodes most commonly involved with metastases from the oral cavity. A supraomohyoid neck dissection includes nodes found above the omohyoid muscle (level I, level II, level III). Similarly, a lateral neck

dissection removes the nodes most commonly involved with metastases from the pharynx and larynx. A lateral neck dissection usually includes nodes in level II, level III and level IV. There is disagreement on the extent of neck dissection needed after definitive radiotherapy has been administered in a preoperative setting to a patient with N2 or N3 disease in the neck. If a complete response has been achieved after radiotherapy for N1 disease, the strategy of observing the patient is satisfactory. It is believed any patient with a residual mass after radiotherapy should undergo a comprehensive neck dissection, while some feel only removal of the residual mass is necessary. Similarly, some suggest patients with a complete response to radiation of N2 and N3 disease can be observed, whereas others would recommend a comprehensive neck dissection.

General Considerations for Adjuvant Treatment

Many factors influence survival and locoregional tumour control in patients with head and neck cancer. In patients with inadequate surgical margins, extracapsular tumour spread in nodal metastases, and tumour spread to more than one node in the neck receive adjuvant radiotherapy plus or minus chemotherapy after surgery (Shah et al, 1976; Looser et al, 1978; Johnson et al, 1981; Feldman and Fletcher, 1982; Mirimanoff et al, 1985; Peters et al, 1993 Cooper et al, 2004). Many clinicians also believe vascular, lymphatic and perineural invasion are worrisome features. Patients with advanced cancers (even if resected with a seemingly satisfying margin) or laryngeal tumours which require preoperative tracheotomy are usually treated with postoperative radiotherapy.

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