

Chapter 15

Cancer Metastatic to the Parotid Gland

ABSTRACT

Carcinoma metastatic to the parotid gland is a region-specific disorder. History usually reveals a previous cutaneous squamous cell carcinoma (SCC) or melanoma. Physical examination may show scars of previous operations, current head and neck lesions, associated lymphadenopathy, and altered sensation. Investigations include fiberoptic naso-endoscopy, fine needle aspiration cytology, computed tomography scan, magnetic resonance imaging, and positron emission tomography. Treatment options include surgery (ablative/reconstructive), radiotherapy (indicated for SCC and melanoma), chemotherapy (indicated for SCC), chemo-immunotherapy (may have a role for melanoma). Complications to avoid include (1) wound-related complications (skin flap necrosis and skin flap “button-hole” formation), (2) tumor-related complications (inappropriate surgery due to inadequate preoperative investigation or omitting neck dissection in patients with concomitant neck disease, tumor rupture, and local tumor recurrence), (3) gland-related complications (salivary fistula and sialoceles), and (4) nerve-related complications (facial nerve injury, Frey’s syndrome or gustatory sweating, and great auricular nerve neuroma).

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INTRODUCTION

Metastatic involvement of the salivary glands is relatively rare, but most commonly seen in the parotid gland. Although many malignancies have been implicated, metastasis is typically due to cutaneous squamous cell carcinoma (SCC) and melanoma (Clark & Wang, 2016). The major mechanism through which this occurs is via lymphatic spread into intra-parotid lymph nodes (LNs). The presence of lymphatic tissue within the parotid gland is a unique feature and results from incorporation of lymphoid tissue due to late encapsulation of the parotid gland during embryogenesis. Intra-parotid LNs act as the major drainage pathway of the ocular adnexa and the cutaneous surfaces of the forehead and lateral aspect of the head (Kashiwagi et al, 2016). Therefore, identification of abnormal-appearing intra-parotid LNs should warrant close inspection of these regions for a primary malignancy.

On imaging, metastases to intra-parotid LNs appear similar to metastatic LNs elsewhere in the head and neck region. Progressive enlargement, central necrosis, and ill-defined margins are all imaging features, suggestive of lymphatic metastasis. In clinical practice, differentiating metastatic intra-parotid LNs from primary salivary cancer is very difficult and *biopsy* is often necessary. Kashiwagi et al. (2016) reported that metastatic involvement most commonly occurs in the parotid tail and pretragal region of the superficial lobe. Thus, identification of a lesion in one of these areas in a patient with known cutaneous SCC or melanoma should raise the suspicion for metastatic involvement.

PATHOLOGY OF CANCER METASTATIC TO THE PAROTID GLAND

Carcinoma metastatic to the parotid gland is a region-specific disorder where the relative incidence of the various histopathological types is dependent on geographical location as shown in Table 1. In Australia, metastatic cutaneous squamous cell carcinoma (SCC) is the most common malignancy seen in the parotid, including primary cancer of the parotid gland (Bron, Traynor, McNeil, & O'Brien, 2003). This contrasts with North America and Europe where primary cancer of the parotid gland is more frequent (Woods, Chong, & Beahrs, 1975). Although metastatic cancer to the parotid is relatively infrequent worldwide, in 40% of patients with this disease it will be the

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