Occult metastatic disease and the role of elective nodal dissection in primary parotid salivary malignancies

Justin Hintze[1], Stephen Garry[1], Deirdre Callanan[1], Andrew Dias[1], Linda Feeley[2,3], Patrick Sheahan[1,3]

1. Dept. of Otolaryngology - Head and Neck Surgery, South Infirmary Victoria University Hospital, Cork, 2. ENTO Research Institute, University College Cork, 3. Dept. of Histopathology, Cork University Hospital

Introduction:
Cancers of the parotid gland are rare. Surgical extirpation of the primary tumour and clinically involved lymph nodes forms the cornerstone of management.1,2 The management of regional nodes in the clinically negative neck is still debated. The aim of the present study was to examine the rate of occult disease in cases of primary parotid malignancy, and determine any risk factors for recurrence.

Methods:
Retrospective review of 55 surgically treated parotid gland malignancies at a tertiary referral centre between 1998 and 2021.

Results:
Mean age of the cohort was 59.7 years. Preoperative FNA was reported as benign or non-diagnostic in 34.5% of cases and malignant in 65.5%. The nodal basin was clinically staged cN0 in 80% (n=44). A neck dissection was performed in 34 cases (61.8%). The most common final histological diagnosis was adenocarcinoma NOS (29.1%). Seven patients staged cN0 had occult nodal disease, 15.5%. The most common area of occult nodal spread were level two nodes in all seven cases, followed by level one in two cases. Recurrence occurred in 14 patients. A higher T-stage (T3/T4) and N+ status was associated with an increased risk in any recurrence (p=0.004, 0.035 respectively). The overall mean survival of the entire cohort was 139.2 ï,± 20.1 month. There was no difference in overall or disease-specific survival depending on neck dissection, extent of parotidectomy, T or N-stage or adjuvant radio- or chemotherapy.

Conclusion:
The risk of occult nodal disease in the primary salivary gland malignancies is 15.5%, with the most commonly involved nodes level two. Elective dissection in patients with primary parotid malignancies may offer more accurate neck staging and help in planning adjuvant treatment, however a limited nodal dissection could be sufficient.