Histopathological features of occult metastasis detected by sentinel lymph node biopsy in oral and oropharyngeal squamous cell carcinoma

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OBJECTIVES: Sentinel lymph node biopsy has been introduced for head and neck cancer with promising results. Research in breast cancer has revealed different histopathological features of occult lymph node metastasis with possibly different clinical and prognostic implications. The aim of the study was to evaluate the histopathological features of occult metastasis detected by sentinel lymph node in oral and oropharyngeal squamous cell carcinoma. STUDY DESIGN: Prospective. METHODS: According to Hermanek (5), occult metastasis was differentiated into isolated tumor cells and infiltration of lymph node parenchyma smaller than 2 mm in diameter (micrometastasis) and larger than 2 mm in diameter (metastasis). RESULTS: Occult metastases were found in 6 of 19 (32%) sentinel lymph nodes. Three patients showed micrometastasis with a mean size of 1.4 mm (range, 1.2-1.5 mm), the first with three separate micrometastases within the same sentinel lymph node, the second with an additional cluster of isolated tumor cells within the same sentinel lymph node, and the third with an additional micrometastasis in one lymph node of the elective neck dissection. Two patients had macrometastasis (3.4 and 8 mm), both with multiple metastases in the elective neck dissection. One patient had two clusters of isolated tumor cells in the sentinel lymph node and an additional cluster of isolated tumor cells in one lymph node of the elective neck dissection. CONCLUSIONS: Occult metastasis can be subdivided histopathologically in isolated tumor cells, micrometastasis, and macrometastasis. We present the first study describing a great variety of these subtypes in sentinel lymph nodes from head and neck squamous cell carcinoma. Because the independent prognostic factor and clinical relevance of these subtypes is still unclear, we emphasize the importance of reporting these findings uniformly and according to well-established criteria.