Occult metastases detected by sentinel node biopsy in patients with early oral and oropharyngeal squamous cell carcinomas: Impact on survival

Martina Broglie Däppen, Stephan K Haerle, Gerhard F Huber, Sarah Haile & Sandro Stöckli

BACKGROUND: Analysis of the lymphatic drainage pattern, the reliability of a negative sentinel lymph node biopsy (SLNB), as well as the impact of sentinel lymph node (SLN) metastases on regional control and survival in patients with early stage oral and oropharyngeal squamous cell carcinoma (SCC). METHODS: A prospective consecutive cohort analysis was conducted which included 111 patients diagnosed between 2003 and 2010. Endpoints of the study were neck control rate, overall survival (OS), disease-specific survival (DSS), and disease-free survival (DFS), depending on the size of occult metastases. RESULTS: Forty-nine of 111 patients (38%) had positive SLNs, 10 had isolated tumor cells (ITCs), 19 had micrometastases, and 13 had macrometastases. OS, DSS, and DFS at 3 years for SLN-negative and SLN-positive patients was 98% and 71%, 95% and 76%, and 98% and 73%, respectively. Furthermore, there was a statistically significant difference between the SLN-negative group and ITCs in DSS as well as between the SLN-negative group and patients with micrometastases in OS and DSS and between the SLN-negative group and patients with macrometastases in all 3 survival estimates. CONCLUSION: Our study is the first to demonstrate that even small tumor deposits only detectable by the extensive histopathologic workup of the SLNB protocol have a significant impact on tumor control and survival in early Oropharyngeal SCC. Whether these findings will translate into different treatment strategies based on the upstaged neck has to be further investigated. © 2012 Wiley Periodicals, Inc. Head Neck, 2012.