A preliminary study on sentinel lymph node biopsy: feasibility and predictive ability in oral cavity cancer

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The main factor that affects the prognosis of patients with head and neck cancer (HNC) is regional lymph node metastases. For this reason, the accurate evaluation of neck metastases is required for neck management. This study investigates the sentinel lymph node identification and the accuracy of the histopathology of the sentinel lymph node in patients with HNC. Eleven patients with histologically proven oral squamous cell carcinoma accessible to radiocolloid injection were enrolled in this study. Using both lymphoscintigraphy and a handheld gamma probe, the sentinel lymph node could be identified in all 11 patients. Subsequently, the sentinel lymph nodes and the neck dissection specimen were examined for lymph node involvement due to tumor. The histopathology of sentinel lymph nodes was consistent with the pathological N classification in all 11 patients. Furthermore, the histopathology of sentinel lymph nodes was superior to physical examination, computed tomography (CT), magnetic resonance imaging (MRI) and positron emission tomography (PET) scan. The results of this study indicate that sentinel lymph node identification is technically feasible and predicts cervical metastases in patients with oral cavity cancer. This may be a useful diagnostic technique for identifying lymph node disease in staging lymph node dissection.

Key words: sentinel lymph node, head and neck cancer, neck dissection