



RELIABILITY OF SENTINEL LYMPH NODE BIOPSY IN ORAL SQUAMOUS CELL CARCINOMA PATIENTS

by

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ABSTRACT

Aims and Objectives : To analyze whether the sentinel lymph node can be identified by methylene blue dye, to assess the frequency of skip metastasis in oral squamous cell carcinoma and to determine the predictive value and the accuracy of sentinel lymph node biopsy for the presence or absence of metastatic neck disease in oral squamous cell carcinoma .

Material and Methods: 20 consecutive biopsy-proven cases of oral squamous cell carcinoma who reported to the craniomaxillofacial Unit, SDM Dental College and Hospital were included in the study. A thorough clinical examination carried out, and nodal status evaluated with clinical palpation and USG. Intra-operatively, 3ml of 1% Methylene blue dye injected sub-mucosally at the periphery of the primary lesion, the lymph node first stained for the blue dye sent for the frozen section analysis and the result so obtained compared with the paraffin-embedded Hematoxylin and Eosin stained histological sections of the same node. A comparison was carried out to compare the predictive value and accuracy of clinical palpation, USG and SLNB.

Results: Among 20 patients, sentinel node could be identified in 14 cases. In 6 cases there was difficulty in identification of the sentinel node. Among correctly identified 14 cases, 8 were frozen-negative and 6 were frozen-positive. All 8 frozen-negative cases were also negative on final histological examination. Among 6 frozen-positive cases, one was found to be negative on final histology. One case showed skip-metastasis for a primary lesion of buccal mucosa to level II. On statistical analysis, sensitivity of SLNB concept was found to be 100% for the negative predictive value, specificity 85.7%, positive predictive value 83.3%, negative predictive value 100% and accuracy as 91.6%. Compared to clinical palpation and USG, SLNB has better specificity and accuracy for the evaluation of metastatic cervical lymph nodes.

Conclusion: The efficacy of methylene blue dye to correctly identify the sentinel lymph node was found to have 70% identification rate. But when correctly identified, sentinel node can be reliable for the evaluation of cervical lymph node metastasis as can be seen with the results. From our pilot study it can be concluded that SLNB can be an effective tool for staging neck in SCC patients. However, further prospective studies with larger patient sample size are needed to determine its sensitivity, specificity and accuracy in correctly identifying the cervical node status so that appropriate treatment modalities can be utilized for the management of cervical lymph node metastasis.

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