

Assessment of intra operative bony margins: does cytology help?

Ranjit Mandwe

V Y W S Dental College & Hospital, India

Therapeutic concepts with the best chance to cure include surgery with complete resection of all the malignant cells. The success of a curative approach can be evaluated by the incidence of local recurrence, 5 years survival rate and the general patient outcome. These parameters can be controlled by achieving adequate carcinoma free resection margins to optimize surgical outcomes. However, currently there is no standard practice for an intra operative assessment of bone margins if carcinoma infiltrates bone. The sectioning of native bone mostly fails due to its high mineral content, which demands 1-2 weeks of decalcification before histological analysis. This necessitates carcinoma infiltration in the bone and the extent of resection to be determined before surgery by viewing imaging studies. Bone infiltration is observed in up to 56% of cases, compared with 33% with clinical signs of infiltration. However, panoramic radiography under predicts carcinoma invasion in the bone by up to 13 mm, whereas MRI scan over predicts invasion by 19 mm. In contrast, CT scan may under predict the width of invasion by 5 mm but over predicts the depth by 3 mm. Thus, even elaborate imaging techniques, such as CT, MRI, or PET provide sensitivities between 41.7% and 58.3%, compared with histological assessments. In summary, pre-operative and intra operative clinical and radiographic assessment lack accuracy to determine the presence and extent of carcinoma infiltration in the bone and pose a risk for surgical strategies with curative intent. This situation warrants alternative approaches to securely achieve carcinoma free bone margins without sacrificing healthy functional structures. The objectives of this paper are to introduce the intra operative cytological assessment of bone marrow of resection margins in patient with OSCC and evaluate its practicability and diagnostic value.

ranjitmandwe@yahoo.com