Clinicopathologic Determinants of PET-CT Positivity

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INTRODUCTION

Objective: To investigate the impact of clinicopathologic factors on metastatic spread of head and neck squamous cell carcinoma (HNSCC) to cervical lymph nodes. A secondary objective was to compare SUVs to histologic and radiographic features of tumors.

MATERIALS AND METHODS

243 HNSCC patients who underwent PET-CT and neck dissections in the 3 consecutive years were included in the study. Major clinicopathologic features were compared among cervical lymph node positivity, tumor size, and depth of invasion were reported to have a correlation with SUV at PET-CT.

RESULTS

Eighty-nine of 243 patients were OC primary (36.6%) followed by OP (33.7%), Lx (18.5%), and neck carcinoma (7.4%). Although PET CT has been shown to have a significant impact on SUV, some parameters of tumor size and depth of invasion were found to be highly predictive of SUV.

DISCUSSION

Clinicopathologic features of a primary tumor such as size and depth of invasion were found to be correlated with SUV. Tumor size and depth of invasion were found to have a correlation with SUV in the study. However, impact of clinicopathological factors on SUV at PET-CT has not been emphasized in the literature. Therefore we aimed to evaluate the impact of major clinicopathologic factors on SUV of HNSCC patients who underwent PET-CT and neck dissections.

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REFERENCES

4. Feng et al. 13 reported that the poorly differentiated tumors are predisposed to poor prognosis. However, SUV was found no different among patients having different nodal status but same T stage. Average SUV was similar in the patients having the same T stage with and without nodal metastases.

CONCLUSION

Malignant tumors are characterized by increased glucose metabolism and energy expenditure. Debris and necrotic tumors – which are clinically predictive of the progression of patients with various primary tumors. Although SUV of tumors is an important factor, it may be used to evaluate the impact of major clinicopathologic factors on SUV of HNSCC patients who underwent PET-CT and neck dissections.