Objective
The role of PET/CT for lung lesions in oral cavity cancer was studied by Yu-Chang Chang, Sheng-Po Hao. They aimed to determine the significant parameters of PET/CT in the prediction of the nature of lung lesions during the staging of newly-diagnosed or recurrent oral cavity cancer.

INTRODUCTION

Approximately 5,400 new cases of squamous cell carcinomas of the oral cavity were diagnosed or recurrent oral cavity cancer. The most common site of distant metastasis is the lung. The incidence of synchronous malignancies in patients with oral and oropharyngeal cancer, Nuklearmedizin. 2009;48(5):192-9; quiz N42. Epub 2009 Jul 21

METHODS AND MATERIALS

We performed a retrospective chart review from July, 2010 to December, 2011. Consecutively, one hundred and eighty three patients, with newly-diagnosed or recurrent oral cavity cancer were enrolled. One of them proved to be squamous cell carcinoma (lung metastasis and second primary lung cancer) and was excluded. Among the 11 cases, 10 were lung metastases and one was second primary lung cancer, and the remaining 3 were chronic inflammation. Comparing with second primary and chronic inflammation, metastases had higher incidence of multifocal lesions comparing with second primary (p-value: <0.05). Metastases and chronic inflammation had higher incidence of multifocal lesions comparing with second primary (p-value: >0.05). The SUVmax value, the multifocal or unifocal, and even the laterality, could be included into a predictive formula for the nature of lung lesion in following muti-center and prospective large case series study.

RESULTS

The SUVmax value, multiple or solitary lesion, laterality to the primary tumours, and the pathology report were done. A two-tailed P-value was used to compare the significant factors for determining metastatic lung lesion (p <0.05 = significant).

COMPARISON OF PARAMETERS

- **SUVmax value**: Lung metastases: 6.65, second primary lung cancer: 3.96, chronic inflammation: 3.98
- **Intralesional lesion nature**: Favor metastatic lung lesions comparing with second primary or chronic inflammation.

DISCUSSION

PET/CT has been introduced as a primary staging tool for the head and neck cancer, and numbers of study have been conducted. Up to date, for detecting nodal metastases, the sensitivity range from 40% to 98% and the specificity range from 92% to 99%. For succedence of metastases, the sensitivity and specificity were measured to be 92% and 91% in one study. P. Wolfgang et al. conducted a large series and reported the sensitivity range from 40% to 98%, the specificity range from 92% to 99%. For second primary malignancies, the average SUVmax 3.93 (p ≈ 0.05) is proved to be barmy, the mean SUVmax of lung metastases was 6.65 (p ≈ 0.05). The SUVmax value of second primary malignancies and chronic inflammation were applied to our study. In our study, for lung metastasis detection, threshold 4 yield a sensitivity and specificity was 50% and 87%. Overall all the positive predictive value for lung metastasis is 45%, and for lung malignancy is 72%.

CONCLUSIONS

PET/CT has been introduced as a primary staging tool for the head and neck cancer, and numbers of study have been conducted. Up to date, for detecting nodal metastases, the sensitivity range from 40% to 98% and the specificity range from 92% to 99%. For succedence of metastases, the sensitivity and specificity were measured to be 92% and 91% in one study. P. Wolfgang et al. conducted a large series and reported the sensitivity range from 40% to 98%, the specificity range from 92% to 99%. For second primary malignancies, the average SUVmax 3.93 (p ≈ 0.05) is proved to be barmy, the mean SUVmax of lung metastases was 6.65 (p ≈ 0.05). The SUVmax value of second primary malignancies and chronic inflammation were applied to our study. In our study, for lung metastasis detection, threshold 4 yield a sensitivity and specificity was 50% and 87%. Overall all the positive predictive value for lung metastasis is 45%, and for lung malignancy is 72%.

REFERENCES