Usefulness of Endoscopic Screening for Synchronous Cancer in HNSCC as Initial Baseline Study

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Objectives

The detection of distant metastases is critical for prognostication and for the choice of treatment in patients with head and neck squamous cell carcinoma (HNSCC). FDG-PET scanning is a functional modality that has been used increasingly for staging head and neck cancer. The CT scan is used for attenuation correction of the PET images as well as for anatomic localization of lesions. The incidence of distant metastases in HNSCC patients is relatively low in comparison with other malignancies. The reported incidence of clinically detected distant metastases in HNSCC patients ranges from 4% to 24%, while mainly historical autopsy studies demonstrated an incidence of distant metastases of 11–47%. The incidence of distant metastases at presentation varies from 2% to 17% of HNSCC patients. The aim of this study was to determine the usefulness of endoscopic screening methods for detecting synchronous malignancies in patients with head and neck carcinoma.

Methods

We performed retrospective medical record review who diagnosed head and neck cancer from Jan. 2003 ~ July 2013. The patients who treated malignancy previously, who doesn't get full test for stage work up, or distant metastasis were excluded. Other histological type except mucosal squamous cell carcinoma are also excluded.

Conclusions

As to their ability in detecting synchronous cancer in head and neck carcinoma, PET or PET/CT showed unsatisfactory detection rate. PET and PET/CT have limitations in the detection of superficial lesions. As initial baseline modality, PET or PET/CT needs supplementary endoscopic studies for the detection of superficial lesions.

Table 1. Synchronous site by index cancer

<table>
<thead>
<tr>
<th></th>
<th>Esophagus</th>
<th>Lung</th>
<th>Stomach</th>
<th>Colon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypopharynx</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Larynx</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oral cavity</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>9</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2. Detectability of synchronous cancer using PET-CT

<table>
<thead>
<tr>
<th>No.of scans of PET-CT</th>
<th>Lesions detected</th>
<th>Not detected</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET-CT(14)</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Sensitivity 50%
Specificity 100%
Positive predictive value 100%
Negative predictive value 95.4%

4 Lesions on Esophagus were diagnosed using EGD with biopsy
3 Lesions in Lung were proven with TBLB, CT guided biopsy

References

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Table 2.