EVALUATION OF GASTRIC SUBMUCOSAL TUMORS BY ENDOSCOPIC VISUALIZED FEATURES ON SUBMUCOSAL ENDOSCOPY

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Introduction

Difficulties in the preoperative diagnosis of gastrointestinal submucosal tumor (SMT) by endoscopic ultrasonography and tissue sampling error may make invasive surgery or endoscopic resection inappropriate for SMT removal. Better methods of diagnosing SMT are therefore needed. We found that bloc biopsy using submucosal endoscopy with a mucosal flap (SEMF) [1] under direct vision could assist in the diagnosis of SMTs [2, 3]. This method has the advantage of assessing the macroscopic characteristics of SMTs. These endoscopic visualized features (EVFs), determined by endoscopic imaging under direct view through a dissected submucosal tunnel, include the color, clarity, shape, tumor coating and solidity of the tumor.

Objective

To investigate the potential of endoscopic diagnostics for SMTs using EVF

Materials & Methods

The EVF of 26 gastric SMT cases, in which the final pathological diagnosis was obtained by bloc biopsy using SEMF, were retrospectively reviewed.

Evaluation items—Assessment I

Each type of SMT was classified according to the five EVF: color, clarity, shape, tumor coating and solidity.

Results

The EVFs were compared between 13 GIST cases and 13 BST cases (with respect to color (white or not white), clarity, shape of tumor surface, the presence or absence of a visible capsule and the rigidity (whether the mass indent when depressed) as evaluated by two endoscopists. Additionally, a combination of three EVFs was compared between two groups.

Evaluation items—Assessment II

The three EVFs were compared between 26 gastric SMT cases.

Conclusion

Gastric SMTs may be classified based on the EVFs, which possess potential diagnostic value for the differentiation of GISTs from BSTs.

Table 1. Statistical analysis between the GIST and BST groups with regard to the five selective characteristic EVF findings and the combination of the three EVF findings (white, cloudy and rigid).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>GIST (13)</th>
<th>BST (13)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color white</td>
<td>13 (100%)</td>
<td>8 (61.5%)</td>
<td>0.039</td>
</tr>
<tr>
<td>Cloudy</td>
<td>13 (100%)</td>
<td>7 (53.8%)</td>
<td>0.014</td>
</tr>
<tr>
<td>Nodular</td>
<td>1 (7.7%)</td>
<td>2 (15.4%)</td>
<td>1.000</td>
</tr>
<tr>
<td>Visible coating</td>
<td>5 (38.5%)</td>
<td>3 (23.1%)</td>
<td>0.673</td>
</tr>
<tr>
<td>Rigid</td>
<td>13 (100%)</td>
<td>8 (61.5%)</td>
<td>0.014</td>
</tr>
<tr>
<td>3 EVFs</td>
<td>13 (100%)</td>
<td>4 (30.8%)</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Significant differences were identified between two groups in terms of the frequency of white, cloudy and rigid tumors (P < 0.05 for all three), respectively. Additionally, the GIST group demonstrated a significantly higher frequency of tumors that exhibited a combination of three EVFs (white, cloudy and rigid) that are consistent with all gastric GISTs (P < 0.05).

References


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