Treatment of acute colonic diverticular bleeding in high risk patients, using an over-the-scope clip: a case series

The prevalence of diverticulosis has increased in industrialized countries in recent years and the condition is reported in up to 60% of patients older than 70 years [1, 2]. Diverticular disease is one of the most common causes of lower gastrointestinal bleeding and accounts for 30%–40% of all such bleeds [3,4]. Many diverticular bleeding episodes resolve spontaneously. However, according to the literature about 50% of patients require blood transfusion and 18%–53% need emergency surgery [2]. Patients undergoing anticoagulation treatment or presenting with severe hemorrhage are at high risk of both morbidity and mortality. The treatment of diverticular hemorrhage remains controversial. If endoscopy can identify the bleeding diverticulum and disrupted inner vessel, therapies such as epinephrine injection, electrocautery, rubber band ligation, or hemoclip placement may be used [3,4].

In this case series we describe six patients with a high operative and rebleeding risk who received an over-the-scope clip (OTSC) for the treatment of acute colonic diverticular bleeding. The prevalence of diverticulosis has increased in industrialized countries in recent years and the condition is reported in up to 60% of patients older than 70 years [1,2]. Diverticular disease is one of the most common causes of lower gastrointestinal bleeding and accounts for 30%–40% of all such bleeds [3,4]. Many diverticular bleeding episodes resolve spontaneously. However, according to the literature about 50% of patients require blood transfusion and 18%–53% need emergency surgery [2]. Patients undergoing anticoagulation treatment or presenting with severe hemorrhage are at high risk of both morbidity and mortality. The treatment of diverticular hemorrhage remains controversial. If endoscopy can identify the bleeding diverticulum and disrupted inner vessel, therapies such as epinephrine injection, electrocautery, rubber band ligation, or hemoclip placement may be used [3,4].

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Both characteristics may be advantageous compared with rubber band ligation. The findings from our case series presented here confirm the results recently published by Probst et al. for a case of diverticular bleeding in a patient undergoing anticoagulation therapy [5]. To our knowledge, this is the largest case series published on the use of the OTSC system for the treatment of diverticular bleeding in high risk situations. We believe that OTSC placement is a safe and effective new option for patients in whom the bleeding diverticulum can be identified endoscopically.

Competing interests: None

Table 1  Treatment of acute colonic diverticular bleeding in high risk patients, using an over-the-scope clip (OTSC): patient and treatment characteristics.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age, years</th>
<th>Sex</th>
<th>Location of bleeding diverticulum</th>
<th>ASA classification</th>
<th>OTSC type</th>
<th>Anticoagulation/antiplatelet therapy</th>
<th>PRBC blood units transfused pre-/post-endoscopy, n</th>
<th>In-hospital rebleeding episode</th>
<th>Additional endoscopic treatment</th>
<th>Delayed rebleeding (interval from initial endoscopic treatment)</th>
<th>Hospitalization, days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>64</td>
<td>M</td>
<td>Sigmoid</td>
<td>ASA 3</td>
<td>21 mm, type t</td>
<td>Clopidogrel</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>M</td>
<td>Ascending colon</td>
<td>ASA 3</td>
<td>21 mm, type t</td>
<td>No</td>
<td>5/7</td>
<td>Yes</td>
<td>Second 2 1-mm OTSC + three endoclips</td>
<td>Yes (4 days)</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>81</td>
<td>M</td>
<td>Sigmoid</td>
<td>ASA 4</td>
<td>17 mm, type t</td>
<td>Warfarin</td>
<td>2</td>
<td>Yes</td>
<td>Fibrin glue injection</td>
<td>Yes (13 days)</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>85</td>
<td>F</td>
<td>Sigmoid</td>
<td>ASA 3</td>
<td>21 mm, type t</td>
<td>Aspirin</td>
<td>0</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>91</td>
<td>M</td>
<td>Sigmoid</td>
<td>ASA 4</td>
<td>21 mm, type t</td>
<td>Warfarin</td>
<td>2</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>M</td>
<td>Transverse colon</td>
<td>ASA 2</td>
<td>21 mm, type t</td>
<td>No</td>
<td>5/2</td>
<td>Yes</td>
<td>Fibrin glue injection</td>
<td>No</td>
<td>7</td>
</tr>
</tbody>
</table>

ASA, American Society of Anaesthesiologists; PRBC, packed red blood cells.

Acknowledgments

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