Incarcerated Stomach in a Parastomal Hernia

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Summary
Parastomal hernia is a rare cause of upper gastrointestinal bleeding. We present a case of an 82-year-old lady who presented with a one-month history of abdominal pain associated with coffee ground vomiting and intermittent melena. Gastroscopy showed bleeding from pyloric canal without a definite lesion. Abdominal CT showed herniation of the pre-pyloric and pyloric regions of the stomach into the hernial sac. She underwent a laparoscopic repair with extensive adhesiolyis, reduction of stomach, approximation of defect and placement of a mesh. She made excellent recovery and had no post-operative complications.

Keywords: Parastomal hernia, Stomach

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Introduction
Despite recent advances in surgical techniques, incidence of parastomal hernia and associated complications is increasing (1). Of particular concern are cases where the stomach or surrounding structures are involved, as these cases often present with a vague clinical picture that mimics gastric ulceration or obstruction, leading to delays in diagnosis and management. Upper gastrointestinal bleeding as a result of gastric parastomal hernia remains an uncommon and poorly characterized complication of ostomy procedures. To date, there has been little agreement on what is the best line of management for patients presenting with parastomal hernia with gastric involvement. We present a case of an 82-year-old lady who presented with a one-month history of abdominal pain associated with coffee ground vomiting and intermittent melena, and was found to have parastomal hernia containing pre-pyloric and pyloric regions of the stomach. She was managed successfully with surgical reduction and repair. Given the rarity and the clinical need, we present a comprehensive review of case reports of parastomal hernia containing stomach and associated complication.

Case presentation
An 82-year-old lady presented with a one-month history of abdominal pain, coffee ground vomiting and intermittent melena. She had had a pan-proctocolectomy and terminal ileostomy at the age of 18 for ulcerative colitis. Her past medical history was significant for deep venous thrombosis for which she was on warfarin therapy. On examination her abdomen was soft, non-tender and her stoma was functioning. An abdominal contrast-enhanced computed tomography of abdomen and pelvis scan showed a complicated parastomal hernia comprising the pre-pyloric and pyloric regions of the stomach with displacement of the first part of the duodenum (Fig. 1). She underwent an esophagogastro-duodenoscopy and was found to have active bleeding from pyloric canal, though no definite ulcer was found. Despite maximum conservative management, her symptoms increased and the patient wished to undergo surgical repair. Laparoscopic exploration revealed a large incarcerated parastomal hernia with the omentum and antrum of the stomach (Fig. 2). The stomach looked bruised though it was viable. The stomach was reduced, the hernia sac was almost completely resected, and the defect was repaired with suturing and mesh placement (Fig. 3). Her postoperative period was uneventful. She has now been on our follow-up for the last 12 months with no recurrence of her symptoms.
Incarcerated stomach in a parastomal hernia

Discussion

We report this case of parastomal hernia complicated by upper gastrointestinal bleeding in an elderly lady. Despite her fragility and significant comorbidities, she underwent a laparoscopic repair and made excellent recovery. Right iliac parastomal hernia containing stomach remains uncommon. To our knowledge, nine previous cases have described parastomal hernia with gastric involvement (Table 1). Gastric outlet obstruction was the presenting complaint in most of the reported cases of gastric involvement in parastomal hernia. The underlying mechanism behind gastric herniation into parastomal space remains unclear. While the stomach lies in a relatively fixed anatomical position, previous reports have suggested that in a proportion of women of advanced age and history of multiple pregnancies the stomach might migrate from its native position (11).

Table 1. Previous published cases

<table>
<thead>
<tr>
<th>Reference</th>
<th>Age</th>
<th>Sex</th>
<th>Presenting complaint</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waheed et al. (2)</td>
<td>58</td>
<td>Female</td>
<td>nausea, malaise, abdominal pain</td>
<td>Conservative</td>
</tr>
<tr>
<td>Barber-Millet et al. (3)</td>
<td>69</td>
<td>Female</td>
<td>vomiting, abdominal pain</td>
<td>Surgical</td>
</tr>
<tr>
<td>Marsh et al. (4)</td>
<td>81</td>
<td>Male</td>
<td>vomiting, abdominal pain, distention</td>
<td>Surgical</td>
</tr>
<tr>
<td>Ramia-Angel et al. (5)</td>
<td>64</td>
<td>Female</td>
<td>abdominal pain, vomiting</td>
<td>Conservative</td>
</tr>
<tr>
<td>Bota et al. (6)</td>
<td>41</td>
<td>Female</td>
<td>vomiting, upper abdominal pain, weight loss</td>
<td>Surgical</td>
</tr>
<tr>
<td>Ilyas et al. (7)</td>
<td>93</td>
<td>Female</td>
<td>vomiting, abdominal distention</td>
<td>Surgical</td>
</tr>
<tr>
<td>Bull et al. (8)</td>
<td>85</td>
<td>Female</td>
<td>abdominal pain, vomiting</td>
<td>Surgical</td>
</tr>
<tr>
<td>Centauri et al. (9)</td>
<td>83</td>
<td>Female</td>
<td>vomiting</td>
<td>Conservative</td>
</tr>
<tr>
<td>De Andrade et al. (10)</td>
<td>69</td>
<td>Female</td>
<td>abdominal pain, bilious vomiting, non-functioning stoma</td>
<td>Surgical</td>
</tr>
</tbody>
</table>

References