Ultrasound-guided percutaneous venting duodenostomy: New technique

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Dear Editor,

A 44-year-old woman with metastatic ovarian cancer underwent suboptimal surgical debulking with segmental resection of the small and large bowel. As part of the surgery, ileostomy was performed because of colonic obstruction. Total parenteral nutrition was initiated after the surgery.

Approximately 3 months after the procedure, the patient started to experience worsening nausea and refractory bilious vomiting.

Computed tomography showed a striking thickening of the gastric wall (Figure 1), duodenal dilatation (megaduodenum), and jejunal obstruction at the level of the ligament of Treitz (Figure 2).

For symptomatic relief of the gastric outlet obstruction, a nasogastric tube was inserted, which resulted in a good clinical response. With the tube, approximately 2 liters of fluid (mainly bilious) was drained daily.

The case was discussed in a multidisciplinary forum. Venting gastrostomy was considered as a palliative treatment.

Moreover, gastroscopy revealed massive gastric wall metastatic infiltration (linitis plastica); therefore, gastrostomy could not be performed. Attempts to insert an endoluminal stent failed because of the difficulty in traversing a guidewire across the jejunal obstruction (Figure 3).

After discussion with the patient, we planned to drain the second part of the duodenum percutaneously.

During gastroscopy, 100 mL of water was infused into the duodenal lumen. Using transabdominal ultrasound, the fluid-filled duodenum was targeted from the right flank, and a needle was inserted into the duodenal lumen under endoscopic control. A guidewire was inserted through the needle into the duodenal lumen, and the procedure was completed in a regular manner. A 20-F gastrostomy tube was inserted into the second part of the duodenum. The procedure was uneventful (Figure 4). The nasogastric tube was removed with a significant improvement in the quality of life of the patient.

The upper gastrointestinal fluids and secretions were drained using a duodenostomy tube. After 10 months of the procedure, the patient had no nausea or vomiting until the time of drafting this manuscript.

Malignant bowel obstruction is a common manifestation in patients with advanced gynecologic malignancy (1). Usually, such obstructions are treated surgically or endoscopically, as medical options are less effective for symptom control. Surgery is the gold standard for treatment, but it is unsuitable for majority of patients and has high complication rates. According to consensus guidelines, the preferred decompressive procedure is venting gastrostomy (2).

Refractory ascites and significant malignant gastric wall involvement are contraindications for gastrostomy. Patients with such conditions usually have a permanent nasogastric tube.

Here we present a new technique of endoscopic decompression to treat patients with malignant bowel obstruction who have a contraindication for venting gastrostomy.

To the best of our knowledge, this is the first described case of ultrasound-guided percutaneous endoscopic du-

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odenostomy for palliative treatment of malignant bowel obstruction.

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