

Rejejunostomy under local anesthesia for patients with esophageal carcinoma

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Abstract: A jejunostomy is performed simultaneously with an esophagectomy for nutritional support. For various reasons, there is the potential for a second-time jejunostomy. We report a new and simple percutaneous technique for jejunostomy replacement under local anesthesia. A new tube is placed into the jejunum andiatrogenically fixed to the previous jejunostomy incision. All five patients in our study accepted the second-time jejunostomy successfully. The mean operating time was 15.8 ± 4.0 min, with limited blood loss. This approach for second-time jejunostomy under local anesthesia in previous surgical jejunostomy patients is technically feasible, with a high technical success rate.

Keywords: Jejunostomy; mini-incision; local anesthesia; esophageal cancer

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Introduction

Patients with esophageal cancer often suffered from malnutrition, so jejunostomy is widely used for enteral nutrition support. However, there is a potential for a second-time placement of the jejunostomy tube, for reasons such as tube dislodgement or unexpected removal (1,2). Several approaches including endoscopic, radiologic, sonographical, and typical surgical techniques have been reported for second-time jejunostomy (1,3-6). We present a simple and effective approach using a single mini-incision under local anesthesia.

Surgical technique

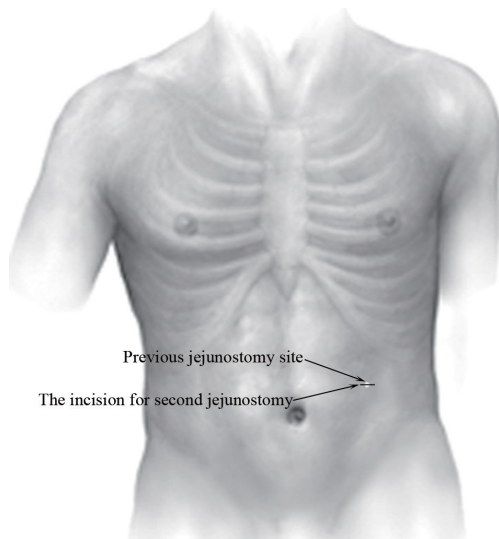
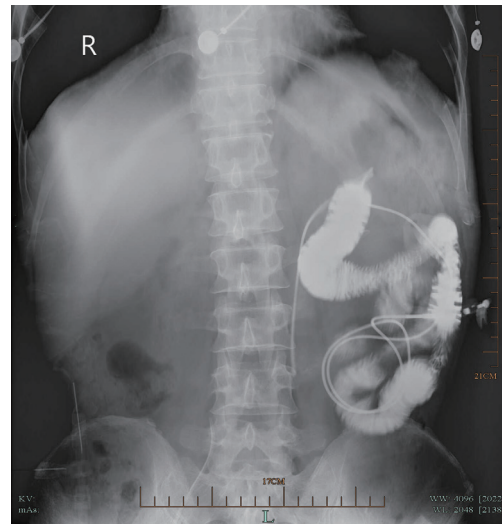
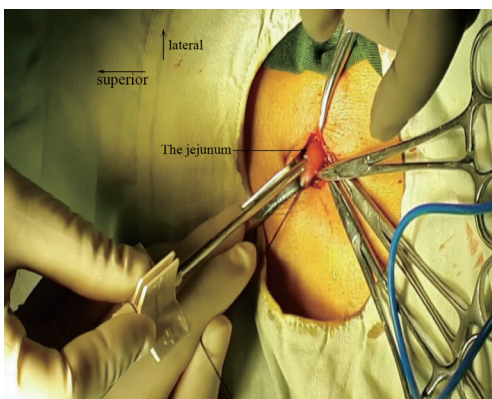
In this study, five percutaneous jejunostomy replacements were performed under local anesthesia in five patients with esophageal carcinoma, between January 2012 and October 2013. Patient characteristics are given in *Table 1*. With the patients in the supine position, local anesthesia using 2% lidocaine was administered with sedatives or analgesics prescribed if necessary, and a 10–20 mm transverse incision was made along the previous jejunostomy site at the left

upper quarter of the abdomen (*Figure 1*). The jejunum was easily pulled out, due to the adhesive band formed between the abdominal wall and the jejunum by the previous jejunostomy. A needle with a 10-cc syringe was then punctured into the jejunal lumen for air inflation, and a needle catheter jejunostomy kit (Freka-FKJ, CH/FR9, Bad Homburg, Germany) was used to place the needle catheter (*Figure 2*). An introducer needle was inserted into the jejunal lumen for the introduction of a feeding tube. Intraluminal placement was confirmed by air injection, with the tube passed through the distal bowel for 20–30 cm. The introducer needle was removed and the feeding tube was firmly secured, with the jejunum, to the inner layer of abdominal wall. Finally, the abdominal wall was closed and the feeding tube was secured externally to the skin. The feeding tube within the jejunum was confirmed by radiography after jejunal injection of contrast media through the feeding tube (*Figure 3*). The detailed procedure was illustrated in *Figure 4*.

The procedures took 15.8 ± 4.0 min (range, 10–20 min), and the mean estimated blood loss was 10 mL (range, 5–20 mL). No postoperative complications developed in any of the five patients.

Table 1 Clinical characteristics of the 5 patients undergone percutaneous jejunostomy replacement

Patients	Age (year)	Gender	Months after the initial jejunostomy placement	Reason for replacement	Operation time (min)	Complications
Patient 1	61	Male	12	Palliative nutrition support	18	None
Patient 2	78	Female	12	Palliative nutrition support	10	None
Patient 3	56	Male	13	Palliative nutrition support	16	None
Patient 4	61	Male	11	Palliative nutrition support	15	None
Patient 5	80	Male	10	Palliative nutrition support	20	None

**Figure 1** The incision of the procedure.**Figure 3** The feeding tube within the jejunum was confirmed by radiography.**Figure 2** Placement of the needle catheter jejunostomy using a needle catheter jejunostomy kit.**Figure 4** Operative techniques for rejejunostomy (7). Available online: <http://www.asvide.com/articles/903>

Comments

Patients with esophageal cancer often suffer from malnutrition, so jejunostomy is widely adopted for enteral nutrition support. Physical and mechanical issues, such as tumor recurrence after tube removal or tube dislodgement (1,2), can lead to the potential for a second-time placement of the jejunostomy tube. The specific reason in our series is tumor recurrence causing upper gastrointestinal obstruction. Several approaches including fluoroscopic, endoscopic, ultrasonic and radiologic methods have been reported for second-time jejunostomy (1,3-6), but most of these are complex and technically demanding, due to the need for general anesthesia and other instruments. We present a simple and effective approach for second-time jejunostomy using a single mini-incision under local anesthesia. The previous jejunostomy enables the jejunum to be iatrogenically fixed to the abdominal wall, resulting in clear exposure of the jejunum via a mini-incision along the previous jejunostomy site. However, several limitations to this technique should be noted. Most important is the limited indication, as this technique is specifically for selected patients with previous jejunostomy, which causes adhesion of the jejunum to the abdominal wall. Perioperative fluoroscopy or ultrasound can be used to identify the adherent jejunum.

Overall, a novel percutaneous technique for a second feeding jejunostomy under local anesthesia is proposed. This is safe and feasible specifically for patients with previous jejunostomy. Our initial experience was encouraging, due to the simplicity of the procedure and the high successful rate.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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