

A Simple Approach to Gastrojejunostomy Tube Exchange Complicated by Clogged Jejunal Port

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Received: 25 April 2019 / Accepted: 5 July 2019 / Published online: 16 July 2019

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Editor

Gastrojejunostomy (GJ) tubes are critical for the alimentation of patients who are not able to tolerate oral intake and who are at risk for aspiration [1]. GJ tube exchanges are common procedures performed by interventional radiologists. Although usually straightforward, the procedure becomes time- and radiation-intensive when the jejunal port is clogged and a guidewire cannot be passed through to allow an exchange. In this situation, many interventionalists remove the dysfunctional GJ tube entirely, without wire purchase, and insert a new tube essentially “from scratch.” This is often a cumbersome process, with the rate-limiting step being cannulation of the pylorus. We describe a modified technique in cases complicated by clogged jejunal ports in which the interventionalist can easily advance a guidewire past the pylorus, allowing for an uncomplicated GJ tube exchange.

The steps to the modified GJ tube exchange technique are as follows: In our practice, a Halyard MIC 22-French, 45 cm length GJ tube is used. Upon encountering difficulty advancing a wire through a clogged jejunal port, remove the wire. Move the external retention ring proximally along

the tube to the hub. Deflate the GJ tube retention balloon. Advance the entire GJ tube slowly under fluoroscopy such that the exit of the gastrostomy port is situated at the pylorus. (The distance from the repositioned external retention ring to the first gastrostomy port hole is 24 cm.) Place a Terumo stiff shaft Glidewire through the gastrostomy port (Fig. 1). As you advance the wire, it will exit the gastrostomy port at the pylorus and naturally course alongside the clogged tube into the bowel (Fig. 2). With adequate wire purchase, the clogged GJ catheter can now be removed over the wire, and a new GJ tube can be placed (Fig. 3).

In our practice, we have employed the modified GJ exchange method for 2 years. We compared the modified technique to the traditional one by examining cases of complicated GJ tube exchanges performed by a single operator (26 years of experience) at our institution. We chose to utilize data from the 2 years preceding the modified technique in order to have a time-equivalent comparative analysis. This study involved access to electronic health records of human subjects, and thus, institutional review board (IRB) approval/exemption was obtained. The majority of cases were uncomplicated: The operator was able to easily advance a stiff Terumo Glidewire through the jejunal port of the dysfunctional GJ tube to the ligament of Treitz, remove the dysfunctional tube, and place a new tube over the wire. Over the 2-year time period preceding the usage of the modified technique, 10 cases were complicated by jejunal port occlusion with failure to pass the guidewire. In these instances, the dysfunctional GJ tube was removed without guidewire catheterization, the percutaneous tract was probed with a multipurpose catheter, a

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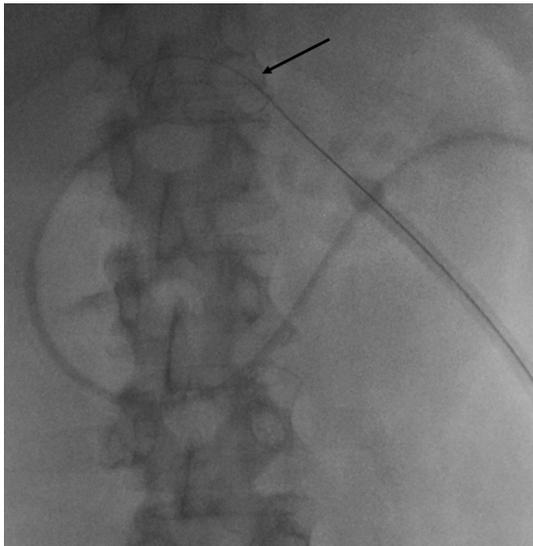


Fig. 1 The Glidewire (Terumo, Somerset, NJ) (arrow) exits the gastric port of the gastrojejunostomy (GJ) tube confirming that the gastric port is patent

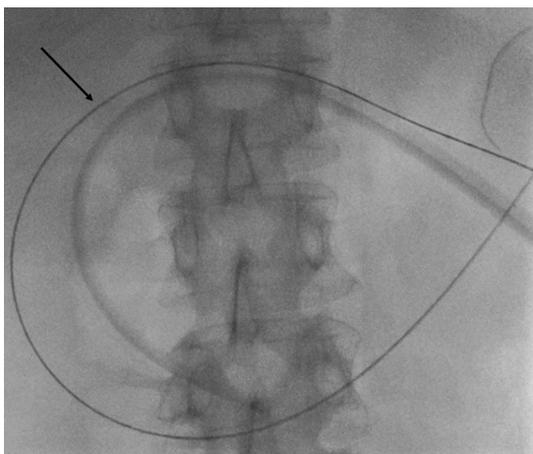


Fig. 2 The gastric port is advanced through the pylorus, with the Glidewire (arrow) exiting the gastric port and extending into the jejunum

stiff guidewire was manipulated into the distal duodenum (often with much difficulty), and new GJ tube was placed. We have used the modified method in six cases to date. The average fluoroscopy time for the modified method versus the traditional method was 0.6 min (0.1–2.4 min) versus 6.9 min (range 1.3–20.5 min) ($p = 0.006$ using two-tailed t test).

In examining the differences between GJ tubes placed by interventional radiologists and endoscopists, Hoffer

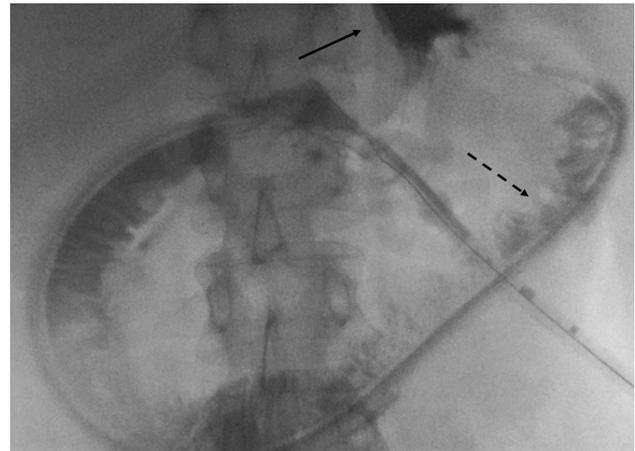


Fig. 3 Contrast injection after placement of a new GJ tube. The gastric port is in appropriate position in the stomach (solid arrow), and the jejunal port is in appropriate position in the jejunum (dashed arrow)

et al. [2] determined that it took interventional radiologists longer to place GJ tubes, and that this difference was due to the difficulty at maneuvering a catheter and wire beyond the pylorus and beyond the ligament of Treitz. We feel that advancing the entire GJ tube such that the gastrostomy port becomes situated beyond the pylorus is a simple solution to facilitating catheterization of the jejunum when the jejunal port is clogged. Our results, though with a few data points, show a statistically significant decrease in fluoroscopy time using the modified approach. To the best of our knowledge, this report is the first to describe this technique. Future studies may be of value in corroborating our findings.

Compliance with Ethical Standards

Conflict of interest All of the authors have no conflicts of interest to disclose.

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