

## • 病例报告 Case report •

## 胰腺癌导致的十二指肠梗阻经肝放置营养管 1 例

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【摘要】 晚期胰腺癌导致的胆道及十二指肠梗阻患者生存期一般较短, 对此类患者应以最小的创伤方法治疗为主。本文报道 1 例晚期胰腺癌导致的胆道及十二指肠梗阻患者, 胆道梗阻给予胆道支架治疗后解除了梗阻性黄疸, 由于此患者心脏功能不全不能耐受胃空肠吻合术, 并且在 DSA 下和内窥镜下放置支架及营养管失败, 最后采取经肝、胆道支架放置营养管治疗, 获得了一定的疗效。

【关键词】 胰腺癌, 十二指肠梗阻, 营养管

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## Successful placement of nutrition tube via transhepatic route for duodenal obstruction due to pancreatic cancer: report of one case

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【Abstract】 Usually the survival period of patients with duodenal obstruction caused by inoperable advanced pancreatic cancer is rather short. For such patients, minimally invasive treatment should be employed as the first choice. This paper reported a case with advanced pancreatic cancer complicated by biliary and duodenal obstruction. After implantation of biliary stent, the obstructive jaundice was relieved. Because of the insufficient cardiac function, the patient was not able to tolerate gastrojejunostomy; besides, as both DSA-guided stent implantation and endoscopic nutrition tube placement failed to success, implantation of nutrition tube via the trans-hepatic and biliary route, as a novel tube placement technique, had to be carried out, and the result in this case was satisfactory. (J Intervent Radiol, 2015, 24: 553-555)

【Key words】 pancreatic cancer; duodenal obstruction; nutrition tube

### 1 INTRODUCTION

The survival period of duodenal obstruction patients due to unresectable pancreatic cancer is only about 12 weeks<sup>[1]</sup>. However, in the setting of both

biliary and duodenal obstruction, the survival period becomes further shorter<sup>[2]</sup>. Considering the systemic condition and poor prognosis, for such patients it is obligatory to employ minimally-invasive therapeutic scheme as far as possible. In the previous clinical practice, gastrojejunostomy<sup>[3]</sup> was regarded as the standard minimally-invasive treatment for malignant duodenal obstruction, but for recent years endoscopic duodenal stenting has been increasingly used to

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palliate duodenal obstruction<sup>[4]</sup>. However, the use of endoscopy is difficult in some cases because of the malignant duodenal obstruction. Therefore, feeding-tube placement is an alternative for patient with duodenal obstruction when gastrojejunostomy or endoscopic duodenal stenting is unable to be performed.

This paper describes a novel technique for feeding tube placement in a patient with duodenal obstruction, in whom all gastrojejunostomy, endoscopic duodenal stenting and routine feeding tube placement failed to success.

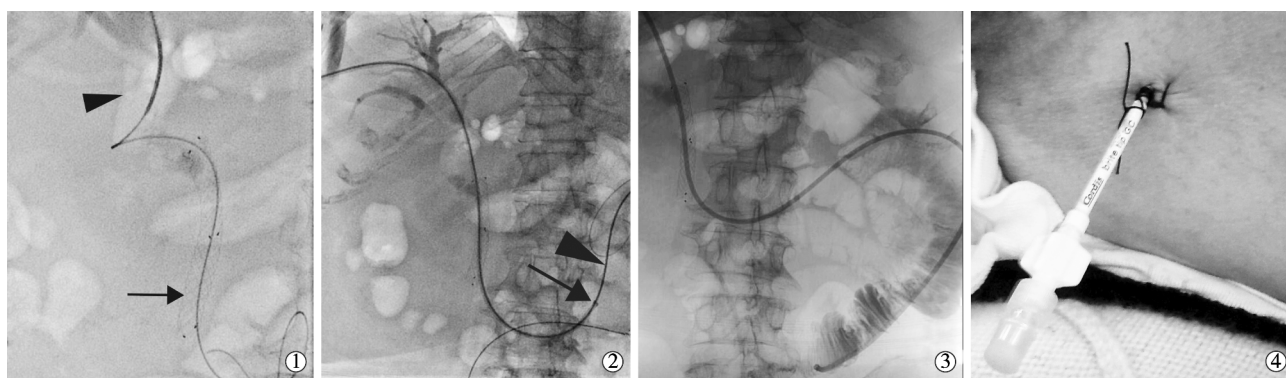
## 2 CASE REPORT

This study is approved by our Institutional Review Committee, and the informed consent to publish is obtained from the patient.

The patient was a 61-year-old female, who presented at the first medical visit with jaundice and was diagnosed of obstructive jaundice due to inoperable pancreatic cancer. She was admitted to hospital to receive biliary stent placement, and was uneventful at the time of discharge. No other treatment was employed. One month later, she developed nausea and vomiting, and endoscopic examination revealed duodenal obstruction, and the duodenal papilla was not affected. As her cardiac ejection fraction was only 19%, gastrojejunostomy was definitely not suitable for her. Even worse, both duodenal stenting and feeding tube placement, performed under fluoroscopic or endoscopic guidance,

failed to success.

Therefore, a new technique of percutaneous tube placement, which was performed via trans-hepatic and biliary route, was suggested. A commercially available percutaneous transhepatic cholangiodrainage (PTCD) set (Cook Medical, Cook, USA) was used. After puncturing the bile duct, a 0.038 inch guide wire was inserted until its tip entered the jejunum (fig.1). Then, a 5-Fr sheath was introduced over the guide wire and a 5-Fr catheter (H1, Cook Co. Ltd., Bloomington, USA) was advanced over the 0.038 inch guide wire until its tip was in the jejunum. The 0.038 inch guide wire was replaced by a long guide wire (150 cm in length; Radifocus Guide wire M Standard type, Terumo Co. Ltd., Japan). Then, the 5-Fr catheter and sheath were removed, and the tunnel was dilated by a dilator; and a 90 cm-long 7-Fr guiding catheter (Vista Brite Tip Guiding Catheter, Johnson & Johnson Co. Ltd., Miami, FL, USA) was co-axially inserted with the 5-Fr H1 catheter until its tip was in the jejunum (fig.2). Finally, both the guide wire and 5-Fr H1 catheter were removed (fig.3), and the 7-Fr guiding catheter outside of the body was fixed to the skin (fig.4). After the procedure, the patient received routine care, prophylactic antibiotics and odynolysis. Every day a total of 2 000–2 400 ml liquid food was administered through the guiding catheter. The patient died of multiple organ failure 28 days after the procedure with no occurrence of hemobilia or infection.



①Stent in the bile duct (arrow). A 0.038 inch guide wire passes through the stent with its tip in the proximal jejunum. Gas in biliary duct can be seen (arrowhead);②The 7-Fr guiding catheter (arrow) and a 5-Fr catheter (arrowhead) are co-axially inserted over the guide wire until its tip reaches the jejunum;③The 7-Fr guiding catheter is placed in the proximal jejunum via biliary duct and stent;④The 7-Fr guiding catheter is fixed to the skin

图 1

### 3 DISCUSSION

During its progression, the inoperable malignant pancreatic tumor not only can cause biliary obstruction, but also can cause duodenal obstruction. Both biliary and duodenal obstruction will cause a series of obvious clinical symptoms, such as jaundice, nausea, vomiting, anorexia, weight loss, etc., and the quality of life will be markedly impaired. As the patient is usually in a very poor condition and only a very short survival time can be expected, it must be kept in mind that for the treatment of such patient the minimally-invasive and effective palliation technique should be adopted as the first choice. Traditionally, bypass surgery or duodenal stenting is employed to relieve the clinical symptoms. Nevertheless, what can we do for these patients who cannot tolerate the bypass surgery and both duodenal stenting and feeding tube placement, performed under fluoroscopic or endoscopic guidance, are unsuccessful in them. This is a question that has baffled the clinicians. The authors have extensively reviewed the relevant medical literatures published in PubMed, and have designed a novel technique for feeding tube placement.

In this paper, the authors reported a novel technique for feeding tube placement in a duodenal obstruction patient. A 7-Fr guiding catheter is used as a feeding tube because its lumen is larger than the usual feeding tube. The 7-Fr guiding catheter is not very flexible, but the incidence of its lumen obstruction is rare. The 7-Fr guiding catheter is placed into the upper jejunum in order to avoid the biliary

tract infection due to food reflux. Through this 7-Fr guiding catheter 2 000–2 400 ml liquid food daily was successfully delivered into the patient's intestine for 28 days until the patient died of multiple organ failure, while no hemobilia or infection occurred. The results indicate that this technique of feeding tube placement for duodenal obstruction is clinically feasible.

In conclusion, although percutaneous placement of feeding tube via transhepatic route for duodenal obstruction due to pancreatic cancer is not a commonly used technique, the use of this technique should be seriously considered when the patient can not tolerate a bypass surgery, or when both duodenal stenting and feeding tube placement failed to success.

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