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CASE REPORT

# An Unexpected Complication of Endoscopic Cystogastrostomy

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**ABSTRACT**

Endoscopic Cystogastrostomy has many complications like bleeding, infection, migration of stent, perforation etc. We report a case of a young male, who had unexpected complication of stent migration postcystogastrostomy, into the duodenum, which re-entered stomach, perforating the wall of antrum. Though this case could be managed conservatively, such complication may lead to fatal consequences such as perforation peritonitis .Thus this case report can be considered as a reference, that such an unexpected complication might occur while performing endoscopic cystogastrostomy.

## INTRODUCTION

This case report describes a case of a young male, who had unexpected complication of stent migration postcystogastrostomy. At the time of removal of stents, distal end of one of the stent was migrated into the duodenum and re-entered the stomach perforating the wall of antrum. Conservative management would be considered in first place like in our case, unless and until patient develops symptomatic peritonitis with hemodynamic instability which requires urgent surgical intervention. This was unique complication of pseudocyst drainage and to our knowledge, there is no case report showing this type of rare complication of endoscopic pseudocyst drainage.

## CASE REPORT

The patient was a 45-years-old male had an episode of alcohol induced acute pancreatitis 5 months back for which he was admitted and managed conservatively. After this episode he used to have intermittent dull aching pain in epigastric region lasting for a month. Later on after few days the pain became continuous with increase in intensity and also noticed a swelling in upper abdomen for which he got admitted in our institute. At that time he did not have history of recurrent vomiting, jaundice, fever, ascites, hematemesis, melena, polyuria, polyphasia or steatorrhea. On general examination his vitals were stable. There was no pallor, Icterus, cyanosis, clubbing or edema of feet. On examination he had palpable pseudocyst in epigastric region of the size of 6 cm × 5.5 cm. Liver and spleen was not palpable and there was no evidence of free fluid in abdomen. Routine blood investigations including HB, CBC and LFT'S were in normal range. Amylase and lipase were high (650 IU/L AND 640 IU/L respectively). On Contrast enhanced Computed Tomography of abdomen there was organised collection near head of pancreas measuring 8 cm × 8 cm × 12 cm (pseudocyst) which was seen compressing the posterior wall of the stomach. Major pancreatic duct was dilated tortuous without any evidence of calculus in it. In view of non-resolving symptoms pseudocyst was drained with standard endoscopic ultrasound guided technique. Two double pigtail plastic stents of the size of 7 French with 5cm length were inserted. The procedure was uneventful and he was discharged next day. After 3 months of procedure his Computed Tomography of the abdomen showed complete resolution of pseudocyst. At the time of removal, one stent was seen in situ and was removed using snare. But other stent was seen migrating across the pylorus into the duodenum with its pigtail end seen re-entering the stomach perforating through the wall of antrum as shown in **Figures 1 and 2**. The proximal end of the stent was in the pseudocyst cavity.

Computed Tomography of the abdomen with oral contrast was done to look for the free leak **(Figure 3 and 4)**. After ruling out leak Pigtail stent was removed through the scope using a rat tooth. Post stent removal patient was discharged after 48 hours of observation.

## DISCUSSION

Endoscopic drainage related complications may be related directly to the procedure or can occur in relation to stents and drains. Procedure related complications may include bleeding (0-9 %) and infection (0-9 %) [1, 2]. Stent related complications generally involve migration (4-6.5 %) and clogging with subsequent infection (0-9 %). The frequency with which these are reported in the literature (11 to 37 percent) varies due to lack of standardization in reporting and differences in patient populations. Many of these can be anticipated and prevented with careful attention to preprocedural imaging and details of technique

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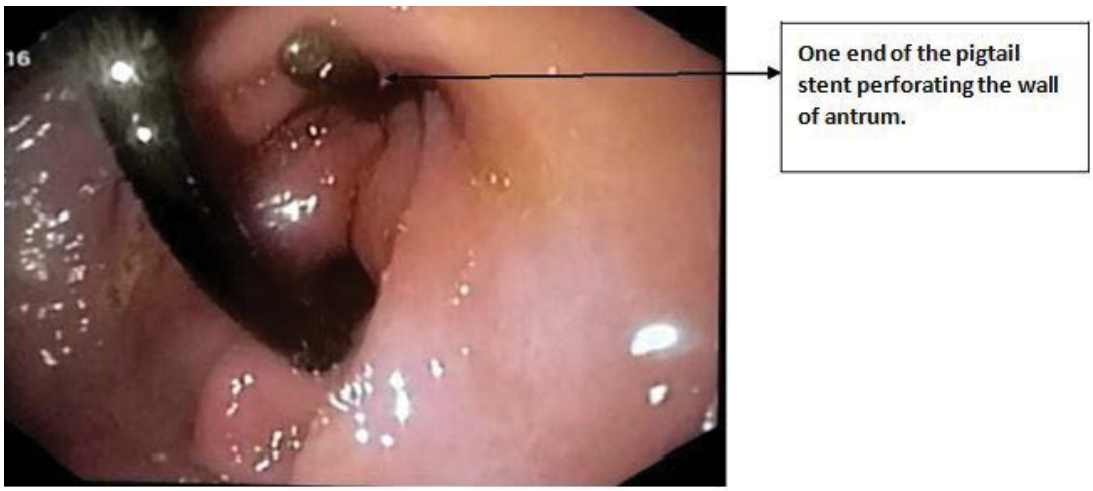


**Figure 1.** Stent migrating across the pylorus into the duodenum with pigtail end perforating the wall of pylorus re-entering the stomach.

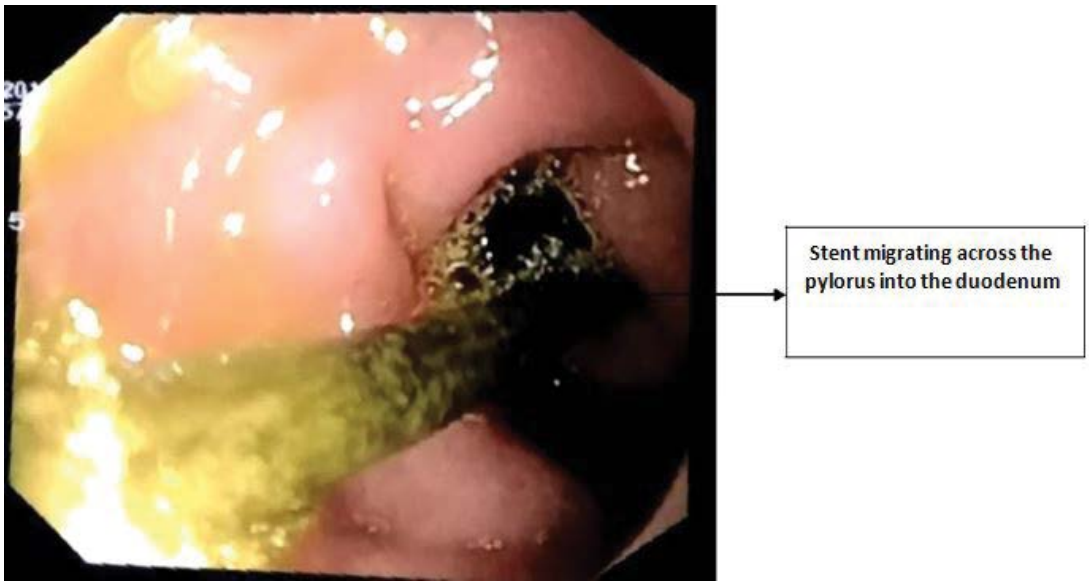


**Figure 2.** Distal end of the stent seen migrating into the duodenum.

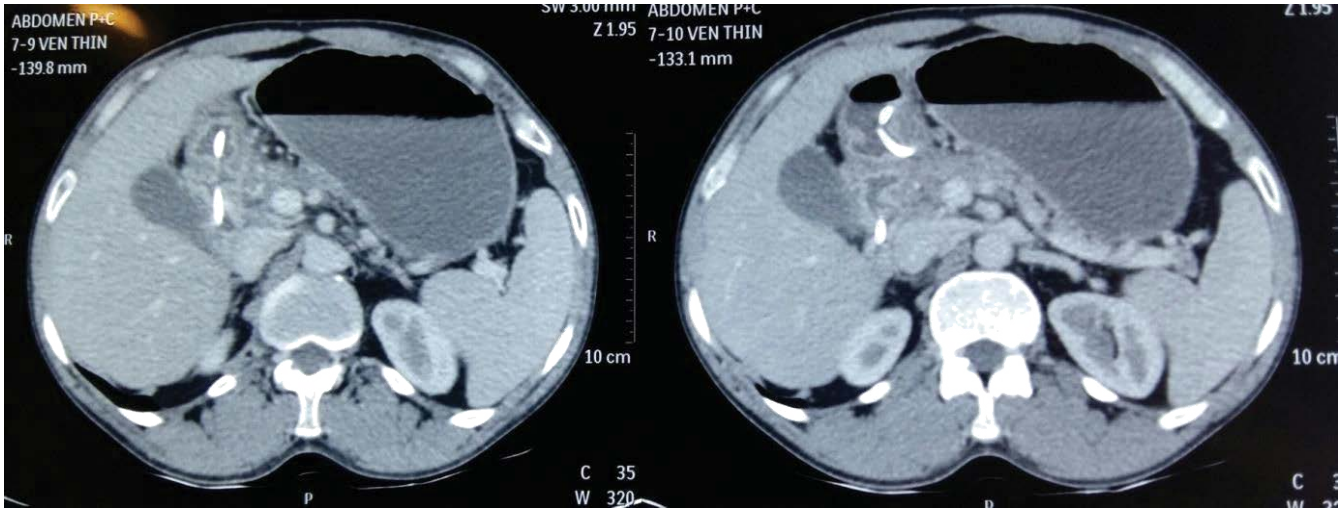


**Figure 3.** CT abdomen showing no extraluminal leak with migrated stent in the duodenum and pigtail end perforating the wall of pylorus.

[3, 4]. There are many published case reports showing stent migration into pseudocyst cavity. Henriksen *et al*. reported in three cases of stents which had migrated into the pseudocyst who were treated with immediate surgery [3]. Guo-Xin Wang *et al*. reported a case of intraperitoneal stent displaced which was removed successfully using endoscope [5]. Varadarajaulu reported a case of successful retrieval of a stent using an over the wire balloon dilator by fluoroscopic guidance [6]. Ill Hyung Chung reported a case of double pigtail stent migrated through a pancreatico-duodenal fistula tract [7]. Hiroshi and group reported a case of stent migration into the lumen of stomach


**Figure 4.** Coronal sections of CT abdomen showing the pigtail end perforating the wall of pylorus.

perforating the wall of stomach during transpapillary drainage of pseudocyst [8]. In the present case distal end of the stent was migrated into the duodenum and the pigtail end re-entered the stomach perforating the wall of antrum. The proximal pigtail end was in pseudocyst cavity. This was unique complication of pseudocyst drainage and to our knowledge, there is no case report showing this type of rare complication of endoscopic pseudocyst drainage. Important to highlight is that in such cases conservative management would be considered in first place like in our case unless and until patient developed symptomatic peritonitis with hemodynamic instability which requires urgent surgical intervention. This case will be helpful as a reference for gastroenterologists that such a rare complication might occur while performing endoscopic cystogastrostomy.

## Conflict of Interest

The authors have no potential conflict of interest.

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