

# Endoscopic Papillectomy for Benign Papilla Adenomas: A Case Report of Chronic Pancreatitis Occurring as A Rare Complication

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**Keywords:** Chronic Pancreatitis; Duodenal Adenomas; Pancreatic Stent

**Abbreviations:** ERCP=Endoscopic Retrograde Cholangiopancreatography; MRCP=Magnetic Resonance Cholangiopancreatography

## ABSTRACT

**Introduction:** Sporadic adenomas of the duodenal papilla are rare to screen in clinical practice that may become potentially invasive if left untreated. The benign adenomas of duodenal papilla are endoscopically feasible, and it offers a treatment procedure. However, a relatively high risk for procedure-related complications exists and needs more intervention treatment. It is generally accepted that short-term difficulty consists of pancreatitis, bleeding, perforation, cholangitis, and long-term one is papillary stenosis. In this case report, we present the rare complication that other investigators never have reported-chronic pancreatitis, and the treatment dealing with the condition.

**Case presentation:** A 73-year-old man was admitted to our hospital for diagnosis and treatment for duodenal adenomas. According to multiple modalities and lab examination, we made a definite diagnosis of duodenal neoplasm. The patient underwent endoscopic papillectomy and soon discharged without symptoms. In the following period, he had recurrent pancreatitis and treated with conservative therapy. Then he was diagnosed with chronic pancreatitis according to modalities and clinical manifestations. We treated this patient by inserting a pancreatic stent. The patient made a fast recovery and has had no recurrence after almost one year of following-up time.

**Conclusion:** By Realizing this rare complication and treating it in time is beneficial to the understanding of the treatment procedure. It needs more clinical investigations to find proper prophylactic measures to prevent it from happening.

## Introduction

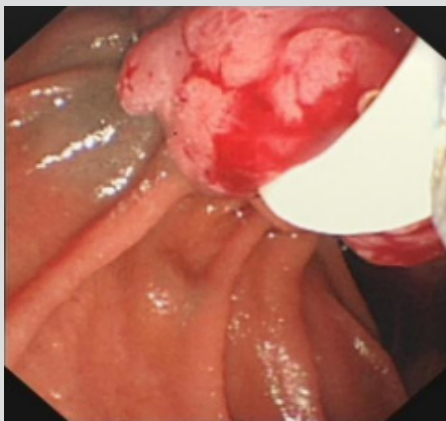
Sporadic tumors of the duodenal papilla are rare, with a prevalence of 0.04% to 0.12% in autopsies [1], most of which are adenomas histologically [2]. They can arise from epithelium or the inner lining of the ampulla. Villous or tubulovillous adenomas of the ampulla of Vater are particularly interesting since they may harbor an undetected malignant neoplasm that could become invasive if left untreated. The enlarging experience with removing colorectal polyps with snare polypectomy led to the recognition that the benign adenomas of duodenal papilla are endoscopically feasible [3]. The endoscopic papillectomy procedure is a curative treatment alternative for benign papillary adenomas, but a relatively high risk for procedure-related complications exists and needs more intervention treatment. Adverse events for this procedure is reported to be composed of short-term and long-term complications. It is generally accepted that short-term complication

consists of pancreatitis, bleeding, perforation, cholangitis, and long-term one is papillary stenosis. Among those referring above, Postoperative pancreatitis, bleeding are common events that account for a large proportion for the whole events. Especially, pancreatitis is unavoidable in some circumstances. Postoperative pancreatitis is reported to have a prevalence of 4%-20% in some series [2,4-6].

And the routine placement of a pancreatic duct stent to prevent the post-procedure papillary stenosis is recommended by investigators [7,8]. In our case, we inserted a pancreatic stent after the endoscopic papillectomy. However, recurrent pancreatitis happened inevitably, and chronic pancreatitis was diagnosed in his last inpatient period. In this case report, we present the rare complication that other investigators never have reported-chronic pancreatitis, and the treatment dealing with the condition.

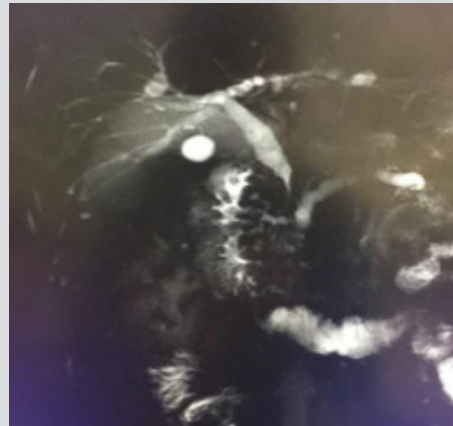
## Case Presentation

A 73-year-old man was admitted into our hospital with the chief complaint that neoplasm of the duodenal papilla was discovered under screening endoscopy for four months. Laboratory examination on admission demonstrated elevation of carbohydrate antigen 19-9 level(87.93IU/L). Other laboratory tests were within normal ranges. And he denied any medical history before. Duodenoscopy revealed an elevated lesion on the lateral wall of the duodenal papilla. Endoscopic ultrasonography was then performed, showing a hypoechoic mass at the major duodenal papilla continuing to the lower common bile duct. Considering the size, the position and absence of malignancy we decided to perform adenoma papillectomy four days later. Papillectomy was performed by an experienced endoscopist with 20 years of experience in interventional endoscopy. The procedure was performed using a lateral-viewing duodenoscope, and we mandated the removal of the entire papilla to allow proper guidance of subsequent treatment (Figure 1). The pancreatic duct was then cannulated, and a guidewire was advanced to the tail.

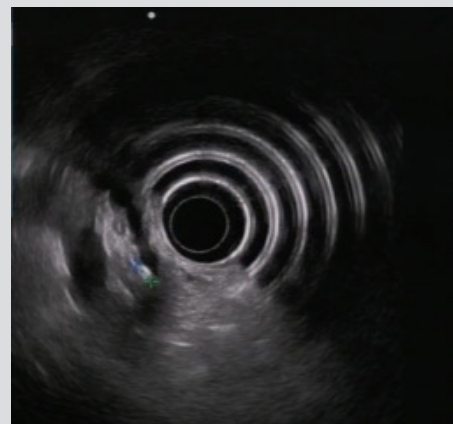


**Figure 1:** Papillectomy procedure was performed via endoscopy to remove the adenomas.

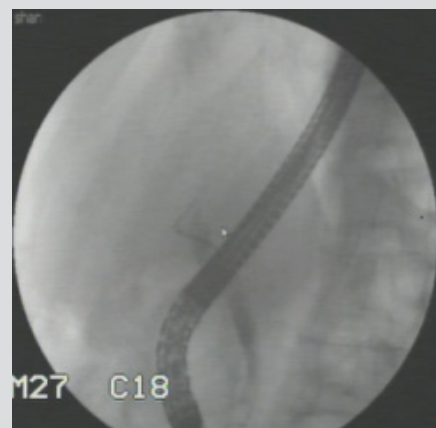
A 7Fr\*9cm prophylactic pancreatic duct stent was inserted, and ENBD(endoscopic nasobiliary drainage) catheter was inserted reaching to the common hepatic duct. Regular 24h inpatient care was held after the procedure. And the operator examines and review the patient carefully, then transferred him to the ward. In the 8th day, an abdominal film was done to ensure the migration of the pancreatic stent. Histological examination of initial multiple forceps biopsy specimens revealed a tubulovillous adenoma. The degree of dysplasia was low-moderate grade. The patient was discharged without complications. In the next two months, he had recurrent pancreatitis due to improper diet. He responded promptly to conservative therapy and was discharged asymptotically. Then in the third month, the endoscopist removed his pancreatic stent by ERCP. Initial surveillance endoscopy was done that no residual or recurrent lesions can be found. In the following two years, the complaint of intermittent abdominal pain and worsened for two months. He was sent to our hospital for treatment. Serum levels of glucose were elevated at 6.75mmol/L.MRCP revealed the presence of multiple stones in the dilated central pancreatic duct (Figure 2).



**Figure 2:** MRCP revealed the presence of multiple stones in the dilated main pancreatic duct.



**Figure 3:** Endoscopic ultrasonography was performed to denote that atrophy pancreas and pancreatic stone echo in the dilated pancreatic duct.



**Figure 4 :** A 5Fr\*8cm pancreatic duct stent was inserted by ERCP.

Endoscopic ultrasonography reveals the atrophy pancreas and pancreatic stone echo in the dilated pancreatic duct (Figure 3). Then the patient underwent ERCP for the placement of the stent. A 5Fr\*8cm pancreatic duct stent was inserted this time (Figure 4). The patient made a fast recovery and has had no recurrence after almost one year of following-up time.

## Discussion and Conclusion

Historically, the treatment for adenomas of the papilla of Vater at first was surgical. The pancreatoduodenectomy was proved to have a high mortality and morbidity rate while transduodenal resection had a high recurrence rate [9-10]. The endoscopic treatment of ampullary adenomas relies on different therapeutic means such as laser photocoagulation, electrocoagulation, or snare resection. Based on the promising results of previous studies, endoscopic papillectomy is considered to be an effective, cost-saving and less traumatic alternative to surgery for curative treatment of early ampullary tumors, with less morbidity and mortality rates than radical surgery. Adenoma of the papilla extending into the common bile duct has so far been performed in only a tiny proportion of patients. And it's still under investigation whether endoscopists should deal with this condition by endoscopic intervention. In this case, the mass was continuing to the lower common bile duct. Considering its relatively amendable and its high long-term endoscopic cure (over 80%), we performed the interventional endoscopy at last. However, the inherent risk of procedure-related complication is unavoidable.

Reported complication rates, even in the most experienced centers, remain high, ranging from 9.7 % to 35 %. Mainly bleeding and pancreatitis has in all studies on endoscopic therapy of papillary tumors. Also, perforation, cholangitis, and papillary stenosis are less commonly to be reported compared with pancreatitis. Pancreatitis was defined as the presence of that influence for all patients who undergo the procedure, owing to the dysmotility of Oddi's sphincter muscle and inadequate drainage. A prospective, randomized, controlled trial evaluating this role of pancreatic stent placement showed a statistically significant decrease in the occurrence of post-ESP pancreatitis and could prevent the papillary stenosis in the long term. In our case, we inserted a prophylactic pancreatic duct stent to prevent postoperative pancreatitis from happening, and the patient was discharged without complications. But he experienced recurrent pancreatitis twice in a short period, and in his last inpatient period, chronic pancreatitis was diagnosed according to the symptom, imaging, and viewpoint during the ERCP procedure.

Then in the future, considering this condition, instead of preventing the stenosis of pancreatic duct and papilla, we would insert a pancreatic stent to ensure the fluid drainage of pancreatic fluid and to make sure that the living standard of this patient would

be reasonable compared with others. Until now, no hospitalizations are found for this patient to have a prominent symptom in need of treatment. In conclusion, chronic pancreatitis is a rare long-term complication that other investigators have never reported before. Once finding it, it needs more investigations to prevent this condition from happening, to ensure the patients' living standard and avoid it advances to malignancy. Intervention in time once diagnosed would have significant infection not only on patients but the medical resources in the whole society.

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