

## Endoscopic Dissection of The Papilla as Access to The Biliary Tract During ERCP

Gomes A\*

Executing Researcher and Principal Investigator, Professor, Surgical Clinic, Faculty of Medical Sciences and Health, Pontifical Catholic University of São Paulo (FCMB / PUC-SP) Sorocaba, São Paulo, Endoscopist at the Endoclinic Endoscopy Service - Sorocaba – SP, Faculty of Medical and Health Sciences of the Pontifical Catholic University of São Paulo, (FCMB / PUC-SP), São Paulo, Brazil. Department of Clinical Surgery, Brazil

### \*Corresponding author:

Alexandre Gomes,  
Executing Researcher and Principal Investigator, Professor, Surgical Clinic, Faculty of Medical Sciences and Health, Pontifical Catholic University of São Paulo (FCMB / PUC-SP) Sorocaba, São Paulo, Endoscopist at the Endoclinic Endoscopy Service - Sorocaba – SP, Faculty of Medical and Health Sciences of the Pontifical Catholic University of São Paulo, (FCMB / PUC-SP), São Paulo, Brazil. Department of Clinical Surgery, Brazil, Telephone: +55-15-32334873, Fax: +55-15-32113601

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## 1. Background

Access to the bile duct in endoscopic retrograde cholangiopancreatography (ERCP) can be done by cannulating the ostium of the papilla through the cannulotome with the aid of a guide wire. However, in about 18% of cases this access is not possible and the endoscopist uses alternative techniques such as precut, fistulotomy, the use of double guide wire or the placement of a pancreatic prosthesis [1]. We will describe the approach to access the bile duct through Endoscopic Dissection of the Papilla (EDP), a different method from conventional fistulotomy. ERCP is an important therapeutic method for clearing the extrahepatic bile duct. Access to the common bile duct is critical for the endoscopic treatment of biliary obstruction. The insistence on attempting cannulation through the ostium, with numerous attempts at progression of the guide wire and the injection of contrast in the pancreatic duct are responsible for most cases of pancreatitis [2, 3]. Thus, avoiding excessive trauma to the papillary ostium and biliopancreatic junction in cannulation attempts is of fundamental importance to avoid acute pancreatitis. We have been using early fistulotomy with endoscopic papilla dissection for a long time, with the technique detailed ahead. With this approach we observed that the success rate of deep bile duct cannulation improved and the cases of post-

ERCP pancreatitis decreased. Work by Han SY (2021) showed that the rate of post-ERCP pancreatitis was significantly affected by the level of endoscopist experience in patients who underwent cannulation and conventional papillotomy, but there was no difference when the technique used was fistulotomy [4,5].

## 2. Objective

The aim of this video is to show the technique of endoscopic dissection of the papilla (EDP) with a layered longitudinal incision for access to the bile duct.

## 3. Conclusion

EDP is a technique easily performed by endoscopists with experience in ERCP, safe, effective, low risk and few comorbidities.

## 4. Technique

An attempt to cannulate the papillary ostium with a sphincterotome and guidewire with the contrast and guidewire directed only to the pancreatic duct was unsuccessful (Figures 1, 2, 3, and 4). After identification and “palpation” with the tip of the fistulotome of the lateral limits of the papilla and exposure of the infundibulum, a wide, shallow incision only of the papillary mucosa was initiated and, purely cut, with the fistulotome needle adjusted to approximately 2 mm, from top to bottom, just below the trans-

verse crease, avoiding opening the region of the common channel (Figure 5). With the needle-knife, the needle was retracted, and the mucosal edges were pushed aside to expose the submucosa. Lateral incisions were made to expand the exposure and then superficial incisions were made to open the submucosa and, dissect thin layers one at a time, interspersed by blunt dissection with the tip of the needle-knife retracted. These steps were followed by identification of vessels, hemostasis and exposure of the sphincter muscle of the distal common bile duct. If bleeding occurred, washing was performed with pressurized water through the fistulotome catheter itself or through the working channel of the duodenoscope, the bleeding point was identified and captured with hot biopsy forceps

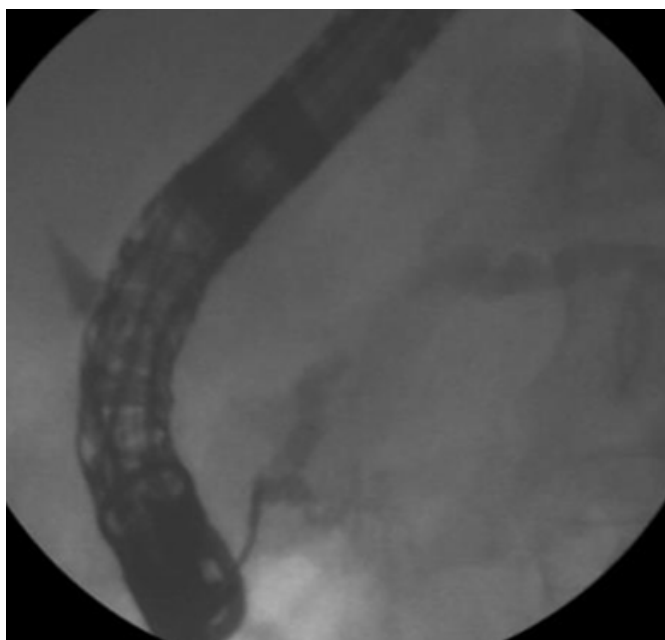
and sealed by seizure, rapid hemostasis was achieved by coagulation, and underlying thermal tissue damage was avoided. At this stage, transversal accessory incisions were made to remove the mucosa over the papilla and improve exposure. Subsequently, sectioning of the muscle fibers and of the common bile duct mucosa was performed, with bile outflow in most cases. Once the common bile duct mucosa was identified, the guide wire was introduced, confirmed by radioscapy and bile duct contrast (Figures 6 and 7). Placement of a biliary stent (Figures 8 and 9). Endoscopic ultrasonography findings showing a tumor in the head of the pancreas obstructing the common bile duct (Figure 10).



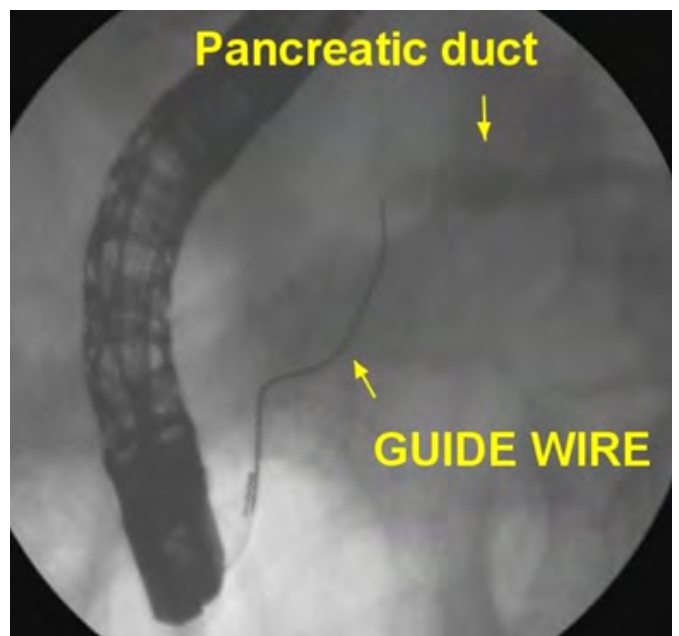
**Figure 1:** papilla



**Figure 2:** cannulation



**Figure 3:** contrasting of the pancreatic duct showing stenosis in the head of the pancreas



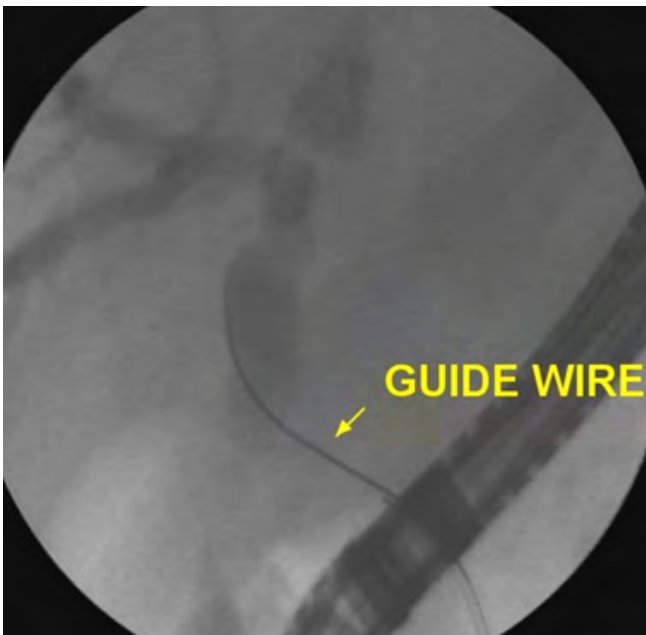
**Figure 4:** guide wire in the pancreatic duct



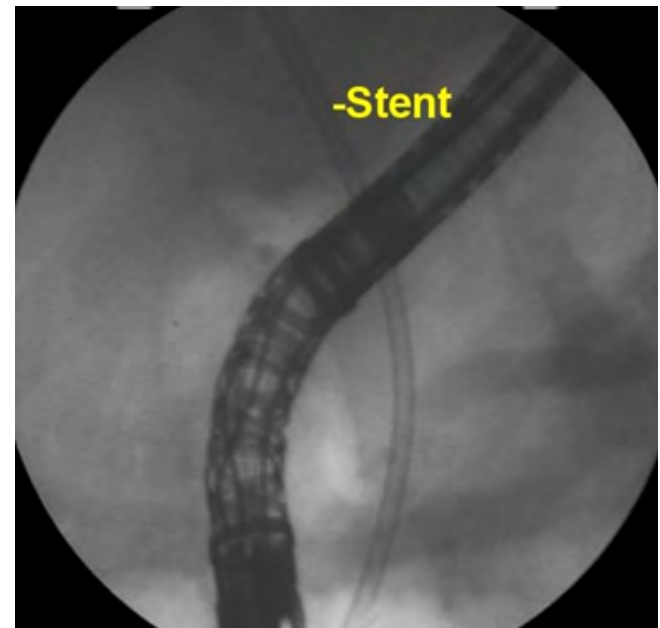
**Figure 5:** longitudinal incision in the papilla



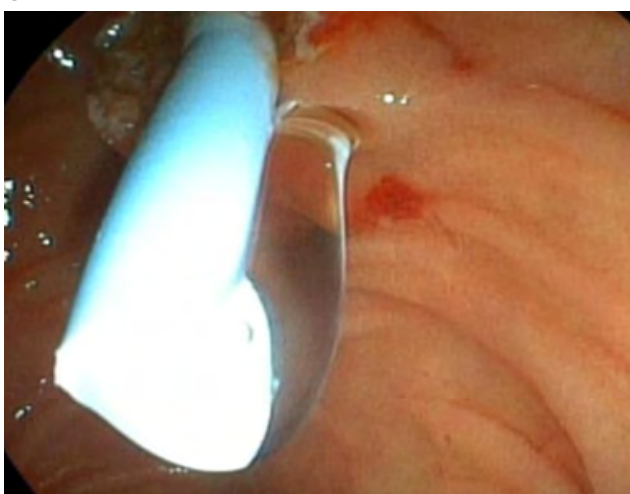
**Figure 6:** Introduction of guide wire into CBD



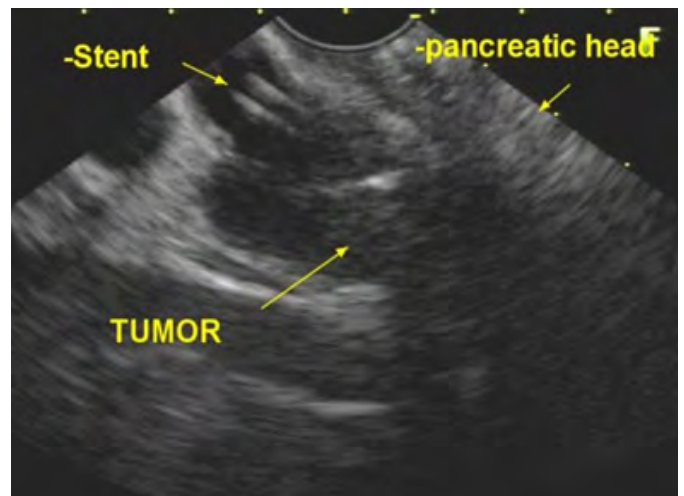
**Figure 7:** Guide wire in the CBD



**Figure 8:** Biliary stent



**Figure 9:** Biliary drainage with plastic stent



**Figure 10:** EUS showing tumor in the head of the pancreas and biliary stent

## 5. Institutional Review Board Statement

This study was reviewed and approved by the Ethics Committee of the Faculdade de Ciências Médicas e da Saúde da Pontifícia Universidade Católica de São Paulo, (FCMB / PUC-SP), São Paulo, Brazil.

## 6. Informed Consent Statement

Patients were not required to give informed consent to the study because the analysis used anonymous clinical data that were obtained after each patient agreed to treatment by written consent.

## 7. Conflict of Interest statement

Author declares no conflicts-of-interest related to this video.

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