

Introduction

- Intraductal papillary mucinous neoplasm (IPMN) is a premalignant condition of the pancreas characterized by epithelial neoplasms of the pancreatic duct (PD).
- Typically, IPMNs are diagnosed by cross sectional imaging and/or endoscopic ultrasound (EUS).
- Less commonly, pancreatoscopy is utilized for direct visualization of the PD using a single operator cholangioscope but it has limitations.
- There are case reports of using thinner gastroscopes to achieve pancreatoscopy, however to date, there are no reports of using adult gastroscopes to directly visualize the main pancreatic duct.

Case Presentation

- 81-year-old-male with hypertension, 15 pack-year tobacco use, recurrent acute pancreatitis, and a known pancreatic mucinous cyst for at least 7 years.
- He initially presented with intermittent abdominal pain and a 10-pound weight loss in the past 4 months.
- Labs were remarkable only for an elevated alkaline phosphatase level.
- CT demonstrated an enlarging pancreatic head mass (**Figure 1**).
- Esophagogastroduodenoscopy (EGD) showed a fishmouth papilla (**Figure 2**).
- Given debris and mucus in the duodenum, suction was used to clear the area near the ampulla. The gastroscope inadvertently intubated the main PD, which was filled with mucus (**Figure 3a**). The mucus was aspirated for cytology and molecular analysis. Clearance of PD showed mucosal irregularity (**Figure 3b**), which was biopsied (**Figure 3c**).
- EUS revealed a 31 mm x 21 mm hypoechoic mass in the uncinate process; fine needle aspiration revealed an inflamed mucinous cystic lesion without malignant cells.
- Cyst fluid showed CEA 266 ng/mL and negative cytology; molecular analysis was interpreted as statistically benign. However the pancreatic main duct biopsy demonstrated at least high-grade dysplasia (**Figure 4**).
- The patient underwent a Whipple procedure, final pathology showed a colloid carcinoma arising in an IPMN.

Images

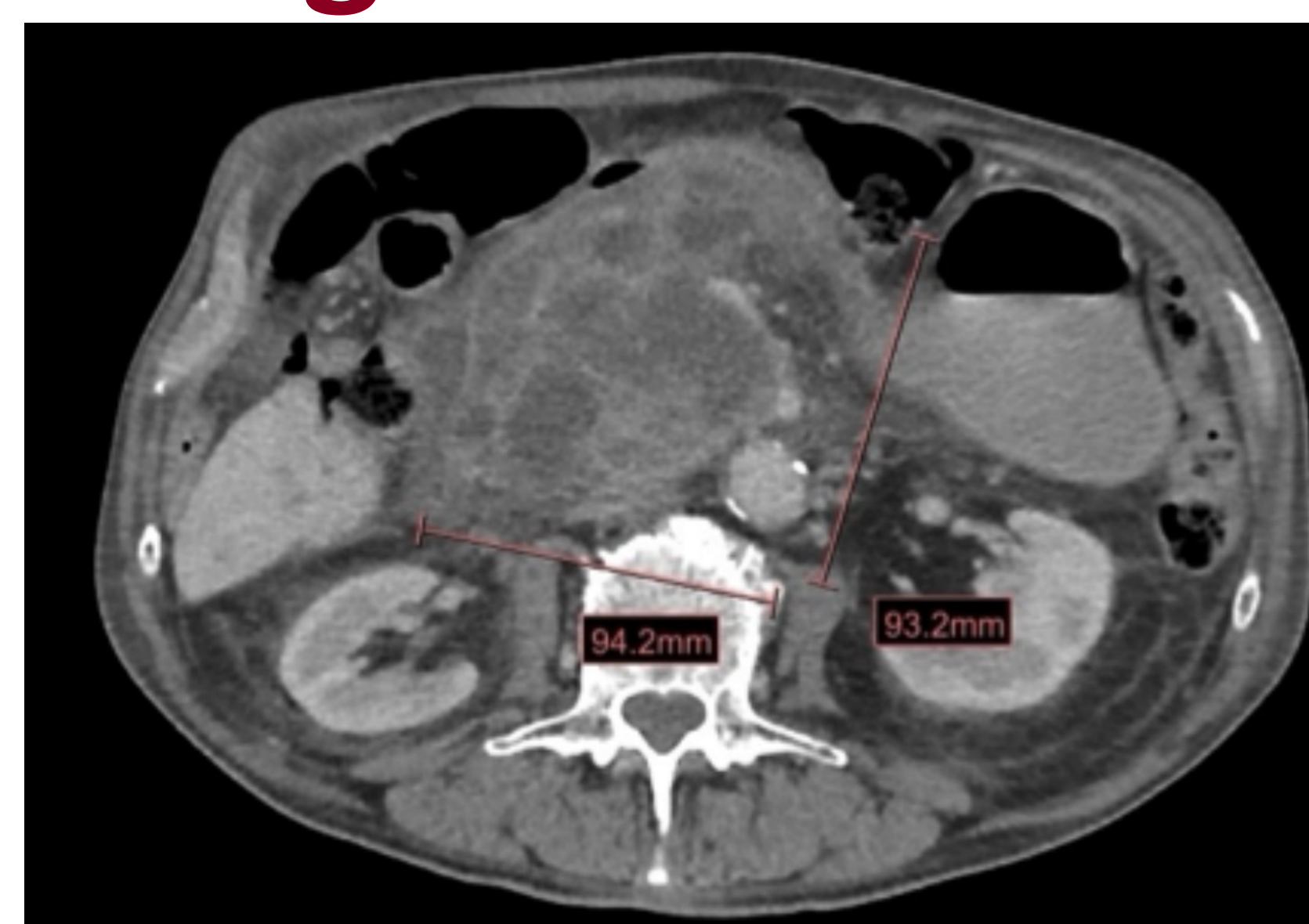


Figure 1. CT showing a 94 mm x 93 mm multi-cystic mass in the pancreatic head and body that was abutting superior mesenteric artery and vein.



Figure 2. EGD showing a fishmouth papilla in the ampulla.

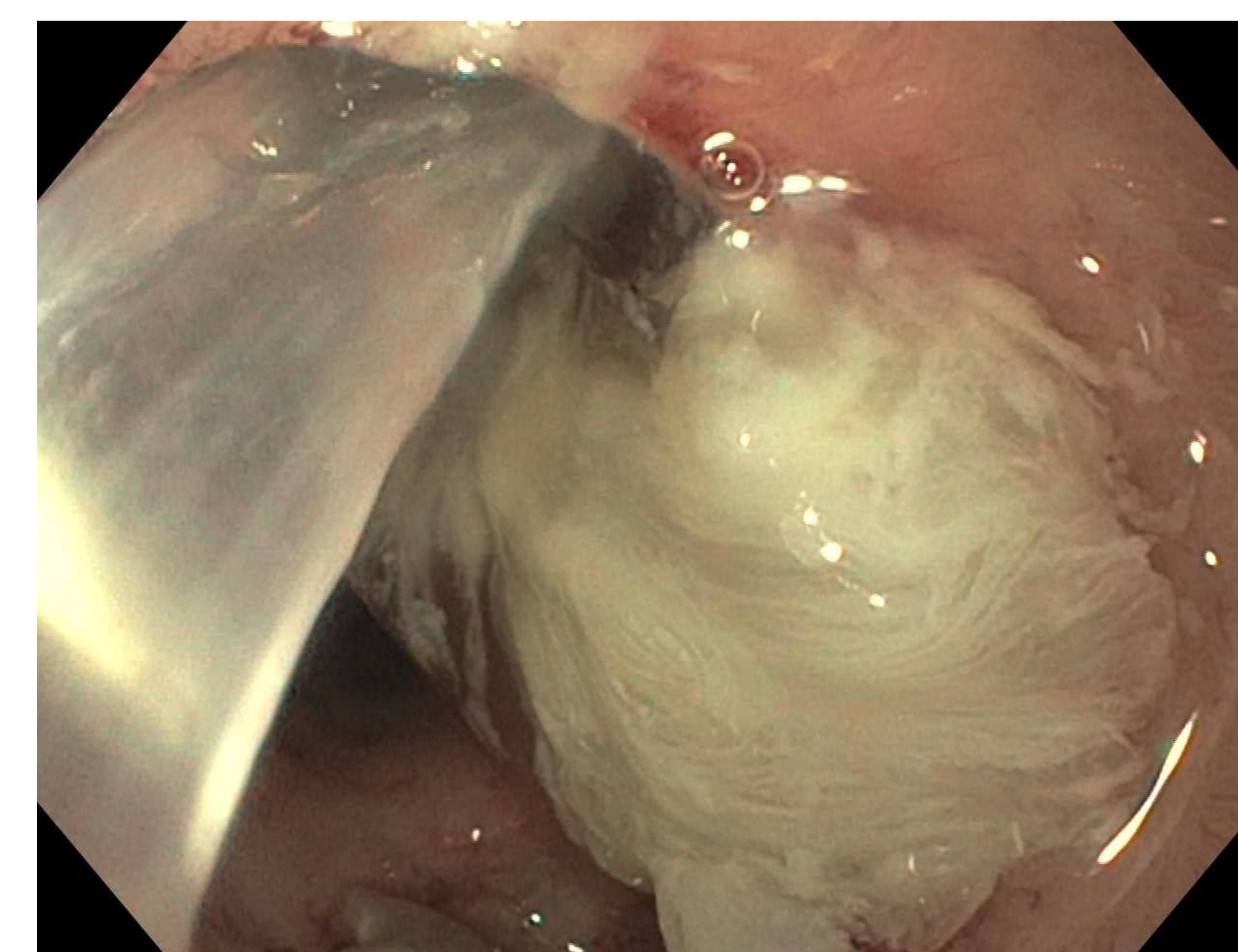


Figure 3a. The main PD filled with thick mucin, which easily aspirated for analysis.

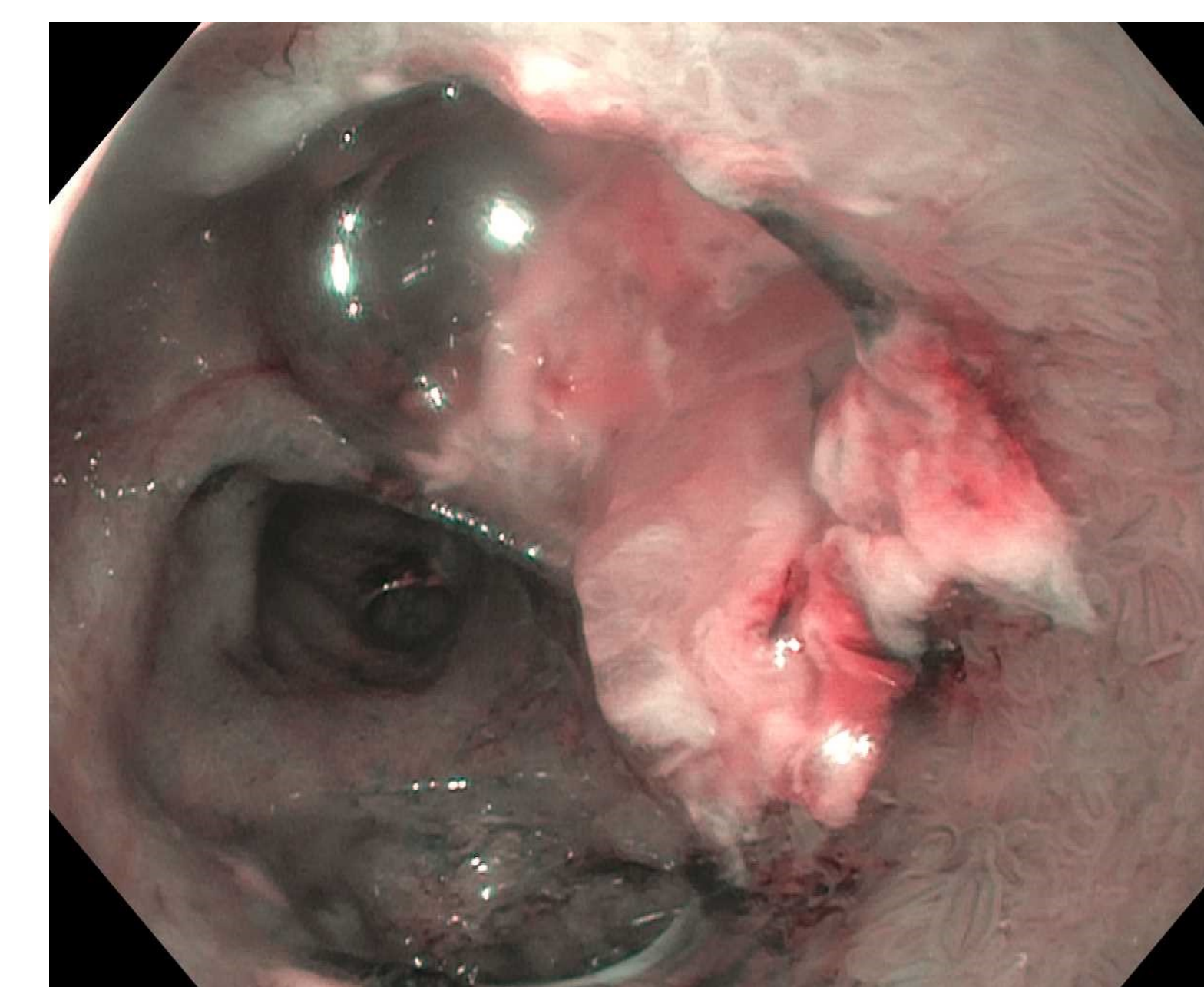


Figure 3b. Narrow band imaging of the main PD highlighting mucosal irregularity.

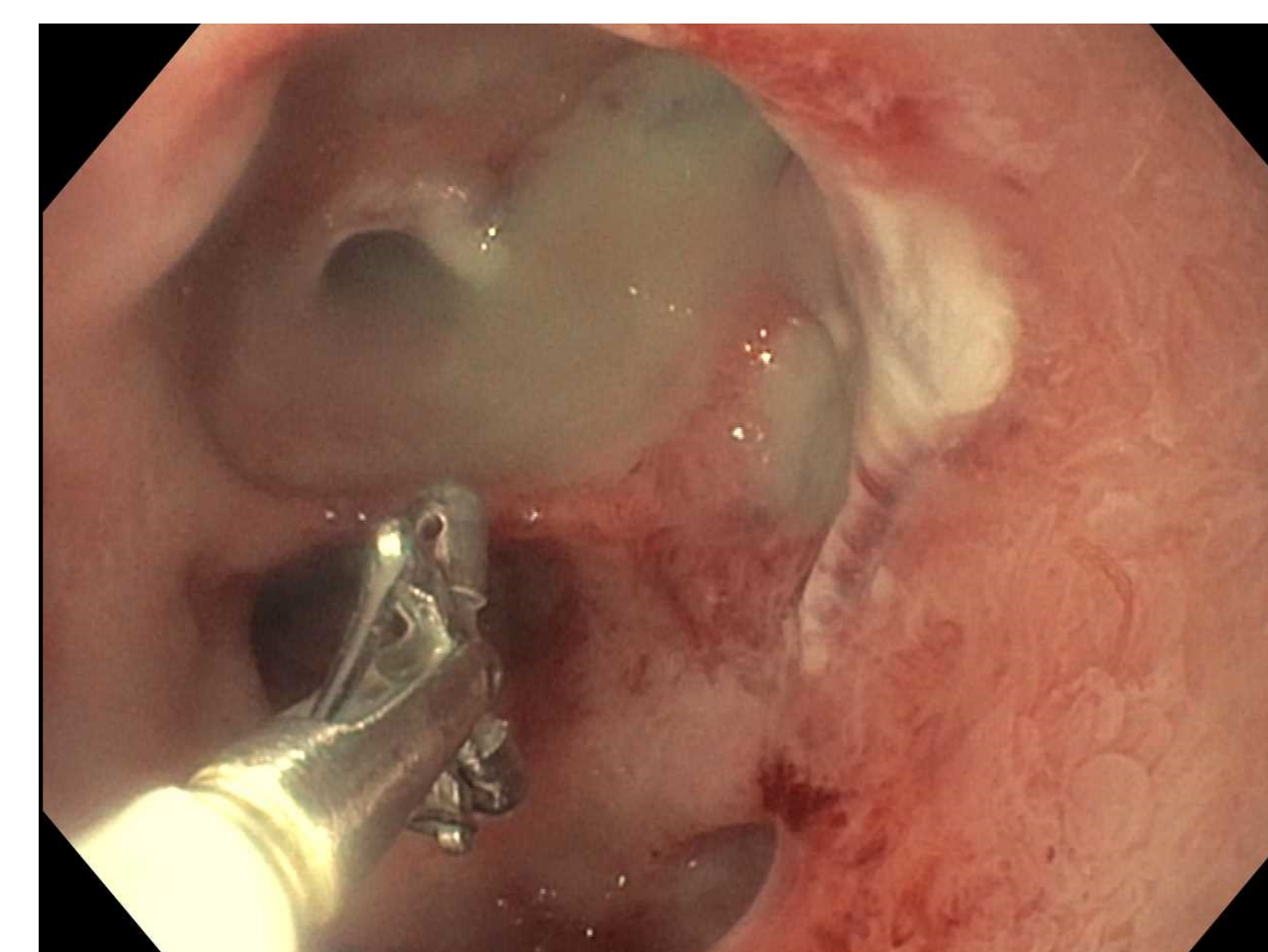


Figure 3c. Pediatric forceps to biopsy the mucosal irregularity in the dilated PD.

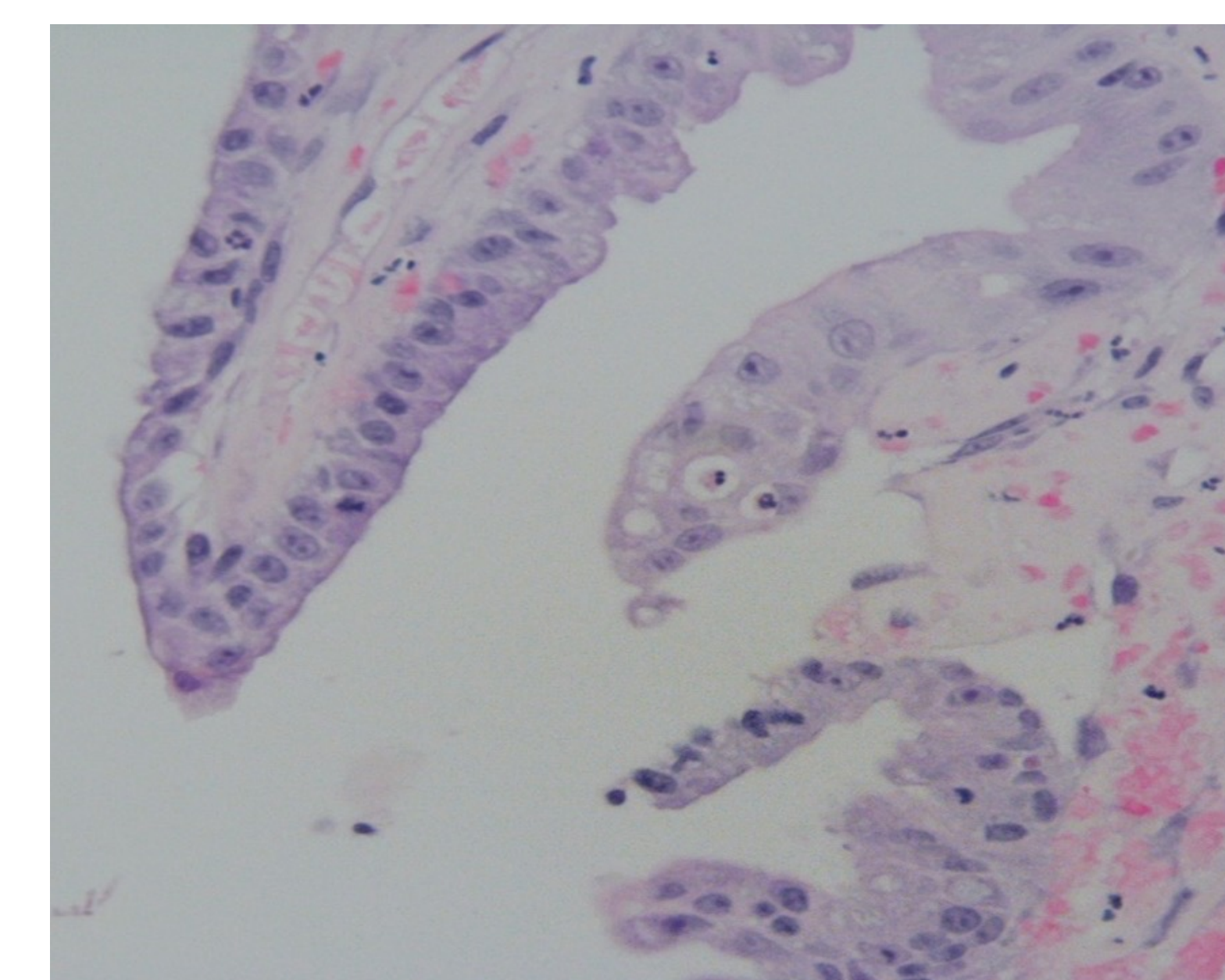


Figure 4. Main PD biopsy showing papillary mucinous epithelial proliferation with high grade dysplasia.

Conclusions

- This case highlights a unique approach in directly visualizing the pancreatic duct using an adult gastroscope.
- The adult gastroscope utilized had a diameter of 9.9 mm which enabled direct passage into the dilated pancreatic duct.
- The working channel of 2.8 mm allowed easy suctioning of the thick mucin for analysis.
- Finally, the maneuverability of the gastroscope allowed relatively easy targeted forceps biopsies of the mucosal irregularities of the pancreatic duct, which helped raise suspicion for malignant transformation.
- Thus if the pancreatic duct is dilated enough, an adult gastroscope can be considered as a means to diagnose and evaluate main duct IPMN.