

Endoscopic Papillectomy for Ampullary adenoma

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Abstract

Key words: ampullary Adenoma, endoscopic papillectomy, endoscopic ultrasonography

Introduction:

Adenomas of the major duodenal papilla have the potential for malignant transformation and require appropriate management 1, 2 Endoscopic papillectomy has become common in recent years as a non-invasive therapeutic procedure for tumor of the papilla of Vater, 3Endoscopic snare papillectomy has increasingly been used with curative intent for ampullary tumors. However, surgical management is considered the treatment of choice in cases of ampullary adenoma with bile duct invasion.4Endoscopic snare papillectomy (ESP) for tumors of the major duodenal papilla is considered to be less invasive than conventional surgical resection, which is associated with significant mortality and perioperative morbidity.5 We herein report a case of Ampullary adenoma occur in 60-years old women who underwent endoscopic papillectomy after accurate preoperative evaluation and staging by EUS

Case report:

A 65-year-old woman presented with recurrent attacks of right upper quadrant abdominal pain for 4 month duration associated with fever, jaundice & pruritis. She had history of hypertension, on diuretics & history of pile surgery. No any similar condition or other chronic illnesses in her family. No personal or family history of chronic gastrointestinal problems. She was referred to Kurdistan center of gastroenterology & hepatology in Sulaymaniah, for further evaluation of her condition. On clinical examination she had only jaundice with scratch marks.

Laboratory findings were as follows: total bilirubin, 12.1 mg/dL (Normal 0.2-1.2 mg/dL); direct bilirubin, 9.5 mg/dL (0.0-0.4 mg/dL); blood urea, 24 mg/dL (8-20 mg/dL); creatinine, 1.1 mg/dL (0.6-1.3 mg/dL); ALT 35U/L, AST 38U/L & Serum alkaline phosphatase of 19 KAU/L; amylase, 95 IU/L (28-100 IU/L)

Abdominal ultrasound revealed distended gall bladder with dilated intra and extra hepatic bile ducts (CBD; 14mm) Abdominal computerized tomography revealed dilated intra and extra hepatic bile ducts down to its distal part with filling defects suggesting choledocholithiasis or peri ampullary mass. Magnetic resonance imaging and magnetic resonance cholangio pancreatography revealed distended gall bladder without stones with marked dilatation of intrahepatic, pancreatic & common bile ducts with the distal ends of both being narrowed & irregular suggesting periampullary tumor;. ERCP was performed with a therapeutic duodenoscope (TJF-130; Olympus Optical Co., Ltd, Tokyo, Japan). A large, ampullary, polypoid lesion (measuring 2.5 _ 2.0 cm) at the level of the major papilla

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was seen (Fig.1) with moderate dilatation of intra and extra hepatic bile ducts with Cholangiography revealed No filling defects in the distal common bile duct (no involvement of distal CBD by ampullary lesion)(Fig.2) EUS, which was performed by using a radial echoendoscope (GF-UM 2000; Olympus Optical Co., Ltd, Tokyo, Japan), demonstrated a hypoechoic mass, measuring 25 mm in size, at the ampulla of Vater. The tumor echo was limited to the ampulla of Vater, without invasion into the duodenal muscularis propria layer, or pancreatic parenchyma suggesting T1 tumor (Fig. 3), endoscopic papillectomy was performed after informed consent was obtained from the patient. Using a duodenoscope (JF-230; Olympus Optical Co.), endoscopic papillectomy was performed using snare (fig .4) After placing the tip of a snare into the scratch to stabilize the snare, tumor excision was performed by using a 45-watt cut current for about 40 s in one session. Only minimal bleeding, which stopped by argon plasma coagulation was noted. A 5-Fr pancreatic duct stent was inserted in order to prevent the development of acute pancreatitis with 7-fr biliary stent inserted in to CBD.

Oral feeding was started 2 days after the procedure without any adverse events. The pancreatic duct stent was removed 4 days after the procedure & the specimen was sent for histopathology.

Histopathological examination of the resected specimen showed ampullary adenoma with high-grade dysplasia and no

invasion of the stalk, close endoscopic follow-up is advised.

The patient was discharged with no complications. The patient is having regular check-ups every 2 months (Fig.5), and as of 11 month after the procedure, no recurrence of the adenoma has been detected.

Discussion:

the standard treatment for ampullary adenoma was management by pancreaticoduodenectomy or local surgical excision,⁶⁻⁷ but endoscopic papillectomy has become a remarkable technique in an age during which less invasive treatments are desirable.

8-10 Endoscopic papillectomy is relatively safe and reliable for complete resection of adenomas of the major duodenal papilla.^{4, 11} Complications occur as a result of endoscopic papillectomy in up to 25% of patients.

These include pancreatitis, bleeding, cholangitis, papillary stenosis, and duodenal perforation. When cholangitis occurs, endoscopic placement of a biliary stent may resolve the problem. Bleeding usually is mild and can be treated endoscopically by using standard techniques, e.g., injection therapy. The most common problematic complication of endoscopic papillary adenoma excision is postprocedure pancreatitis.^{12, 13} Placement of a pancreatic-duct stent has been shown to decrease the risk of post-ERCP pancreatitis^{14, 15} Recently, the long-term success and safety of endoscopic papillectomy for papillary adenoma was demonstrated in two large multicenter studies.^{7,8}

Both studies suggest that the routine placement of a pancreatic-duct stent after the procedure reduces the risk of pancreatitis.^{4,9} Complete removal is required to prevent recurrence of papillary adenoma. En bloc resection is fundamental in the treatment of neoplastic lesions and allows precise histopathologic evaluation of the resection specimen.¹³ In our case, a patient with ampullary adenoma with high grade dysplasia without invasion into duodenal wall or CBD underwent endoscopic papillectomy with prophylactic pancreatic stenting and no major complication occurred with good outcome. In conclusion, for selected patients, endoscopic papillectomy is a simple, technically easy procedure. This method with prophylactic pancreatic duct stent for endoscopic papillectomy may significantly reduce the risk of procedure-related pancreatitis. However, prospective randomized studies are needed to determine whether a pancreatic-duct stent should be placed as a routine prophylactic measure against pancreatitis in all patients.

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References

1. Stolte M, Pscherer C. Adenoma-carcinoma-sequence in the papilla of Vater. *Scand. J. Gastroenterol* 1996; 31: 37682.
2. Maneghetti AT, Safadi B, Stewart L *et al.* Local resection of ampullary tumors. *J. Gastrointest. Surg* 2005; 9: 13006.
3. Kenjiro Y, Koji U, Kiyohito T *et al.* Endoscopic resection of tumor of papilla vater: our experiences. *Digestive Endoscopy* 2003; 15 (Suppl.): S31S32.
4. Desilets DJ, Dy RM, Ku PM, *et al.* Endoscopic management of tumors of the major duodenal papilla: refined techniques to improve outcome and avoid complications. *Gastrointest Endosc* 2001; 54: 202-8.
5. Lambert R, Ponchon T, Chavaillon A, *et al.* Laser treatment of tumors of the papilla of Vater. *Endoscopy* 1988; 20: 22731.)
6. Krukowski ZH, Ewen SWB, Davidson AI, *et al.* Operative management of tubulovillous neoplasms of the duodenum and ampulla. *Br J Surg* 1988; 75: 150-3.
7. Asbun HJ, Lossi RL, Munson JL. Local resection for ampullary tumors: is there a place for it? *Arch Surg* 1993; 128: 515-20
8. Haubrich WS, Johnson RB, Foroozan P. Endoscopic removal of a duodenal adenoma. *Gastrointest Endosc* 1973; 19: 201.

9. Catalano MF, Linder JD, Chak A, et al. Endoscopic management of adenoma of the major duodenal papilla. *Gastrointest Endosc* 2004;59:225-32.
10. Norton ID, Gostout CJ, Baron TH, et al. Safety and outcome of endoscopic snare excision of the major duodenal papilla. *Gastrointest Endosc* 2002;56:239-43
11. Binmoeller KF, Boaventura S, Ramsperger K, et al. Endoscopic snare excision of benign adenomas of the papilla of Vater. *Gastrointest Endosc* 1993;39:127-31
12. Shemesh E, Nass S, Czerniak A. Endoscopic sphincterotomy and endoscopic fulguration in the management of adenoma of the papilla of Vater. *Surg Gynecol Obstet* 1989;169:445-8
13. Jong HM, Sang WH, Young DC, et al. Wire-guided endoscopic snare papillectomy for tumors of the major duodenal papilla. *Gastrointest Endosc* 2005;61:461-466
14. Tarnasky PR, Palesch YY, Cunningham JT, et al. Pancreatic stenting prevents pancreatitis after biliary sphincterotomy in patients with sphincter of Oddi dysfunction. *Gastroenterology* 1998;115:1518-24.
15. Fazel A, Quadri A, Catalano MF, et al. Does a pancreatic duct stent prevent post-ERCP pancreatitis? A prospective randomized study. *Gastrointest Endosc* 2003;57:291-4

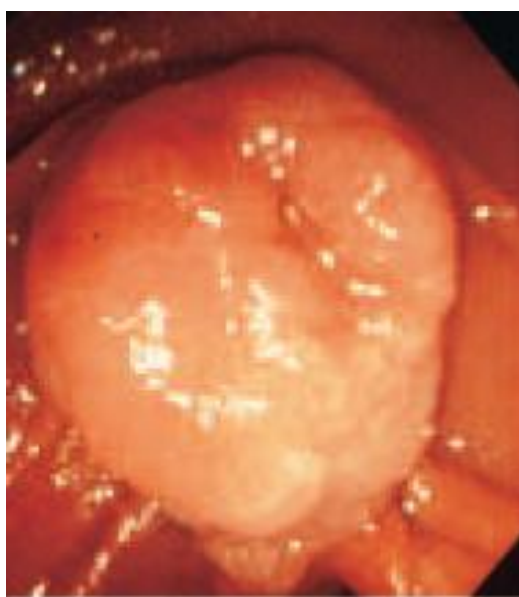


Figure 1. Endoscopic view of large ampullary lesion.

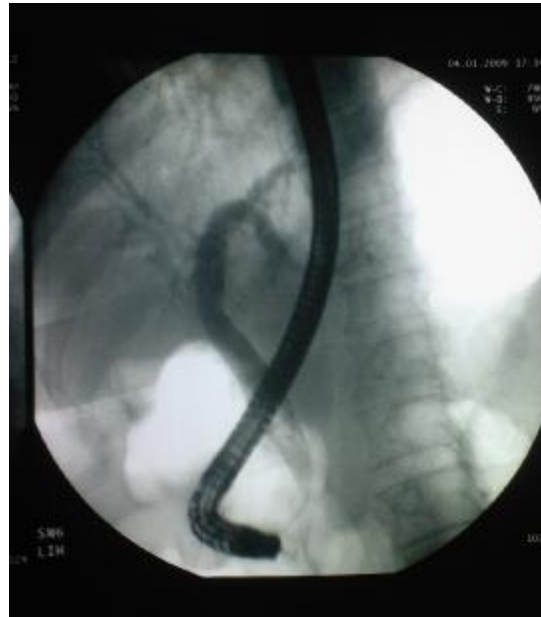


Figure 2. Endoscopic Retrograde cholangiogram, showing dilated CBD with no intraductal filling defect seen



Figure 3. Endoscopic ultrasonography revealed a hypoechoic mass showing no invasion of the duodenal muscularis propria

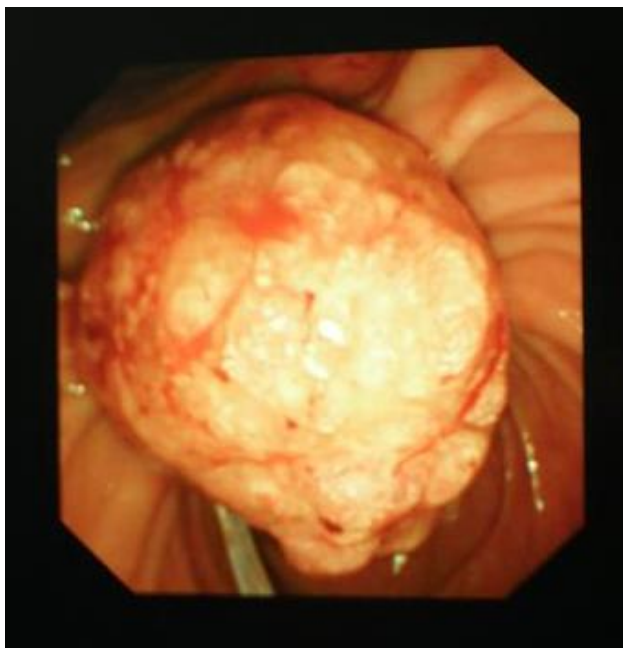


Figure 4. Endoscopic view of snare papillectomy

Figure 5. Endoscopic view at 2 month after endoscopic snarepapillectomy