INTRODUCTION

Carcinoma of the ampulla of Vater is defined as a malignant tumor arising in the last centimeter of the common bile duct where it passes through the wall of the duodenum and ampullary papilla. The pancreatic duct (of Wirsung) and common bile duct merge and exit by way of the ampulla into the duodenum. The ductal epithelium in these areas is columnar and resembles that of the lower common bile duct. Ampullary adenomas cannot always be distinguished from ampullary carcinomas or nonadenomatous polyps (carcinoid tumors, gangliocytic paragangliomas, etc) on the basis of endoscopic appearance alone. Suspicious ampullary lesions should be biopsied before endoscopic resection is attempted. Brush cytology may offer additional information to biopsy for the detection of malignancy in selected cases. There is no consensus on which ampullary adenomas should be kept under surveillance and which lesions should be removed endoscopically or surgically. An incidental, small ampullary adenoma may not require further evaluation or therapy, depending on the clinical context. Lesions with high-grade dysplasia often warrant therapy because they may harbor malignancy missed on biopsy and to prevent progression to malignancy.

Ampullary adenomas have historically been treated surgically. Surgical options include pancreaticoduodenectomy (Whipple’s procedure) or transduodenal ampullectomy. Surgical management often allows complete removal but carries morbidity, including anastomotic dehiscence and fistulae in 9% and 14% of patients, respectively, and mortality rates...
ranging from 1% to 9%, although complication rates tend to be related to surgical case volume.5-7

Endoscopic approaches for the evaluation and treatment of ampullary adenomas now represent a viable alternative to surgical therapy. There are no definitive guidelines as to the size or diameter above which endoscopic removal of ampullary adenomas should not be attempted. Many authors recommend that lesions above 5 cm not be treated endoscopically, although there are reports of successful endoscopic resection of ampullary lesions of greater size.8 The size of the lesion, however, can affect the endoscopic approach to resection, as discussed below.

Endoscopic features such as firmness, ulceration, non-lifting with attempted submucosal injection to create a submucosal fluid cushion, and friability suggest possible malignancy and such lesions should be considered for surgical resection even in the absence of malignancy on biopsy specimens.9 The effectiveness of preoperative biliary drainage (PBD) in pancreaticoduodenectomy is still extensively debated because of the various conflicting postoperative outcomes, which include benign or malignant, pancreatic or peripancreatic, and ampullary or periampullary lesions.10 Opponents of PBD argue that it increases infective complications and morbidity.11 It is not clear whether the procedure itself or its complications influence the morbidity after surgical resection.12

The optimal duration of preoperative drainage also remains unknown. Although several reports have been published, there are still no clear guidelines regarding the use of PBD in these patients.10

**CASE REPORT**

A 78 years female patient was admitted in our clinic for:
- Abdominal pain in right upper quadrant;
- Jaundice;
- Chills, fever 38°C.

**History:**
- Cholecystectomy 40 years ago;
- Chronic ischemic heart disease and atrial fibrillation digitalized and with anticoagulant therapy;
- Six years ago she was diagnosed with type 2 diabetes mellitus, treated only with diet.

**Physical examination:**
Our patient was febrile (T=38°C), had jaundice and pruritus, a blood pressure of 130/75 mm Hg, heart rate was 88 bpm and irregular, respiratory rate was 24 breaths/min. She had abdominal pains especially in right upper quadrant and epigastric area. She had also mild liver enlargement.

**Laboratory tests on admission:**
- Hb = 9.3 g/dl (normal range 11.5-15) with iron levels of 15 µg/dl (normal range 35-150);
- L = 21800/mm3 (normal range 4000-9000), Ne = 85%);
- Lipase = 3559 U/l (normal range 23-300);
- ASAT = 30 U/l (normal range 2-37), ALAT=36 U/l (normal range 0-41);
- Total bilirubin = 7.46 mg/dl (normal range 0.1-1.3);
- Alkaline phosphatase = 720 U/l (normal range 10-258);
- GGTP = 337 U/l (normal range 9-64);
- C reactive protein = 154 mg/l (normal range 0-3);
- Glycemia=167 mg/dl (normal range 65-115);
- Creatinin=1.14mg/dl (normal range 0.5-1.3).

Ultrasound examination revealed an homogenous hepatic structure, moderate dilatation of intrahepatic biliary ducts, dilated common bile duct (17 mm), visible, slightly dilated Wirsung’s duct(5 mm), normal portal vein, normal spleen (115 mm), right kidney with a parapielic cysts and left kidney with multiple parapyelic and intrasinusal cysts.

After this first evaluation, we established three principal diagnoses:
- Severe acute pancreatitis;
- Obstructive jaundice;
- Cholangitis.

For cholangitis we started the antibiotic therapy with Ertapenem 1g/day according to our hospital guide.

This patient presented with signs of lower obstruction located in the papilla because the common bile duct and Wirsung’s duct were both dilated. Therefore we had to search for a tumoral pathology (ampulloma, neoplasm of the pancreatic head) or lithiasis of the common bile duct with an impacted stone in the papilla. At duodenoscopy we found a large papilla (2 cm) with endoscopic appearance of ampulloma with a central, bleeding ulceration which was confirmed histologically after 10 days as an adenocarcinoma. (Fig. 1)

CT-scan did not revealed metastatic disease.

We performed a first ERCP for pancreatic duct stenting with a 10 Fr, 2.5 cm prosthesis for pancreatic drainage and after that we inserted a biliary stent of 10 Fr 4cm. (Figs 2, 3) After the procedures the clinical condition was alleviated, patient became afibrate, jaundice decreased and 7 days after ERCP all biological parameters were in normal range.

We performed a new ultrasound examination in which the biliary tree and pancreatic duct were normal.
The patient will be evaluated at three months for surgical intervention or endoscopic papillectomy depending on her clinical status and consent.

DISCUSSION

In patients with ampullary cancer who undergo surgical resection, obstructive jaundice is associated with a higher risk of postoperative complications than in non-jaundiced patients. The impact of jaundice on postoperative morbidity and mortality is well known. In acute suppurative cholangitis urgent biliary drainage is indicated and can be life-saving.

Endoscopic biliary drainage before surgery is not a widely accepted procedure among pancreatic surgeons. Potential disadvantages of PBD include those inherent to ERCP such as pancreatitis, bleeding, cholangitis and duodenal perforation. In addition, endoscopic biliary stenting has been shown to generate a severe inflammatory reaction in the bile duct, which may make surgical resection more difficult.

A very recent study confirms that biliary drainage in patients with obstructive jaundice due to ampullary cancer results in a reduction in wound infection following surgical resection compared with patients not undergoing PBD.

CONCLUSION

Endoscopic stenting for ampullary carcinoma is the best option for the two major complications with an increased mortality, pancreatitis and cholangitis. However endoscopic procedure is only palliative and the patients need to be evaluated for surgical resection.

REFERENCES