



## Case series of papillectomy by endoscopic retrograde cholangiopancreatography (ERCP)

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### Abstract

Ampullary neoplasms are one of the causes of obstructive jaundice. Endoscopic retrograde cholangiopancreatography (ERCP) is useful procedure for diagnosing and tissue sampling of ampullary neoplasms. Ampullectomy by resecting entire ampulla provides whole lesion for pathologic evaluation and also is appropriate for real pathologic staging for further management decision but ampullectomy considered as a heroic endoscopic procedure. We share our experience in this field and explain our results.

**Keywords:** Ampullary neoplasm, Endoscopic retrograde cholangiopancreatography

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### Introduction

Ampullary neoplasms are common cause of obstructive jaundice. Cross sectional imaging like CT scan has only 20 percent sensitivity for diagnosis of ampullary neoplasms. Endoscopic ultrasonography is useful for diagnosing and staging of ampullary neoplasms but it only has 70 percent accuracy for tissue sampling by FNA. ERCP is a gold standard procedure for diagnosing and tissue sampling of ampullary neoplasms. The endoscopic retrograde cholangiopancreatography (ERCP) is nearly 100 percent accurate when ampulla is grossly tumoral or ulcerated.

Gross appearance of ampulla is normal in 30 percent of ampullary neoplasms and physicians only suspect when it is causing obstructive jaundice or grossly prominent. The usual approach for tissue sampling in these lesions is biopsy after sphincterotomy. Even after sphincterotomy the sensitivity of biopsy is low and do not represent the pathology of entire ampulla and most of the times multiple ERCP and biopsy are required (1).

Ampullectomy by resecting entire ampulla provides whole lesion for pathologic evaluation and also is appropriate for real pathologic staging for further management decision.

As ampullectomy is a heroic endoscopic procedure that gastroenterologists hesitate to perform.

Endoscopic papillectomy (EP) is accepted nowadays as an alternative therapy to surgery in ampullary adenoma and has high success and low recurrence rates.

Endoscopic ampullectomy means the resection of the mucosa and submucosa of the duodenal wall, in attachment area of the ampulla of Vater, including the tissue around the bile duct and the pancreatic duct orifices (2,3).

The accepted criteria for Endoscopic ampullectomy include a size up to 5 cm, no evidence of malignancy on endoscopic findings, and no evidence of intraductal growth. These indications are in ongoing progress.

Although the endoscopic ampullectomy is a high-risk procedure, it has successfully replaced surgical intervention for benign or malignant papillary tumors. Moreover, the procedure is associated with lower morbidity and mortality in comparison with surgery and seems to be a preferable treatment option for small ampullary tumors without intraductal extension. When Endoscopic ampullectomy performed by an experienced physician, it can lead to successful eradication of tumor in up to 85% of patients with ampullary adenomas. Thus, it is an effective and safe modality and should be established as the first line therapy for ampullary adenomas (4-6).

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#### ↑What is “already known” in this topic:

Endoscopic papillectomy (EP) is accepted nowadays as an alternative therapy to surgery in ampullary adenoma and has high success and low recurrence rates.

#### →What this article adds:

Here we report the result of initial experience of our center in ampullectomy.

Table 1. summarized data of patients.

Age	Sex	Presentation	Endoscopic findings	Pathology	Follow up
63	Female	Icterus and itching	Prominent ampulla	Tubular adenoma with focal high-grade dysplasia	No tumor in control ERCP
69	Male	Icterus and itching and weight loss	Prominent ampulla	R/O Adenocarcinoma	In follow up
42	Female	Icterus and itching	Ampullary polyp	Tubulovillous polyp with low grade dysplasia	No tumor in control ERCP surgery
50	Male	Icterus	Prominent ampulla	Adenocarcinoma arising in tubular adenoma with invasion to muscularis propria	
58	Female	Abdominal pain	Prominent ampulla	Chronic duodenitis	Pancreatitis as a side effect surgery
48	Male	Icterus	Tumor of ampulla	Well differentiated neuroendocrine tumor with invasion to duodenal wall	
81	Female	Abdominal pain	Prominent ampulla	Hyperplastic polyp	Ok
64	Female	Fever and icterus	Tumor of ampulla	Tubulovillous adenoma with focal high-grade dysplasia/T3N1 on EUS	In follow up
65	Female	Icterus and itching	Tumor of ampulla	Poorly differentiated adenocarcinoma	In follow up
55	Female	Icterus and itching and weight loss	Tumor of ampulla	R/O Adenocarcinoma	In follow up
79	Male	Fever and weight loss and Icterus	Prominent ampulla	Invasive adenocarcinoma	In follow up
70	Female	Icterus	Prominent ampulla	Well differentiated adenocarcinoma	In follow up
74	Female	Icterus	Prominent ampulla	Adenocarcinoma well to moderate differentiated	In follow up

### Case series

Here we report the result of initial experience of our center in an ampullectomy procedure. In our center we have as first report of 13 patients and the main data are summarized in Table 1. Also you can see the ampulla after resection from one patient in Fig. 1.

Our experience in ampullectomy showed that it is a safe and practical approach for diagnosis and also treatment of ampullary neoplasms.

### Discussion

In the case series of Shujiro T and his colleagues 80.9 percent of patients treated with single session of ampullectomy with various complications such as pancreatitis, cholangitis, retroperitoneal perforation and bleeding (7).

Follow-up with surveillance should be performed



Fig. 1. Ampulla after resection. Green arrow is CBD lumen and red Pancreatic duct

within first 4 to 8 weeks after ampullectomy and should be continued for at least three years when the pathology report indicating a high-grade dysplasia. This is because of the possible recurrence of tumor during these years (8).

In other case series Between January 2008 and November 2011, 12 patients with ampullary tumors underwent endoscopic ampullectomy. The technique was endoscopic double-snare for all 12 patients. The ampullectomy of these patients was safe and complete (9-11).

It is standard practice in GI tract to proceed to resect entire lesions like polypoid lesions by simple snare polypectomy or by advance procedures like Endoscopic Mucosal Resection (EMR) or Endoscopic Submucosal Dissection (ESD). We suggest that these approaches also can be useful in ampullary neoplasms because it leads to good diagnostic and curative results with low side effects. The ERCP centers should have good experience with this procedure.

### Conflict of Interests

The authors declare that they have no competing interests.

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