UDC 616-006-089-072.1

M. Y. Nychytaylo, P. V. Ogorodnyk, A. G. Deynychenko

ENDOSCOPIC TREATMENT OF AMPULLARY TUMORS

The National Institute of Surgery and Transplantology, Kiev, Ukraine

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М. Е. Ничитайло, П. В. Огородник, А. Г. Дейниченко
ЭНДОСКОПИЧЕСКОЕ ЛЕЧЕНИЕ АМПУЛЯРНЫХ ОПУХОЛЕЙ
Национальный институт хирургии и трансплантологии, Киев, Украина
Ампулярные аденомы являются предраковыми новообразованиями и встречаются примерно от 0,04 до 0,12 % случаев. В последнее время эндоскопическая папиллэктомия все чаще используется с лечебной целью для этих новообразований. Эндоскопическое лечение было таким: эндоскопическая папиллэктомия — 21 (13 %), супрапапиллярная холедохотомия — 91 (55 %), стентирование нитиноловым стентом — 31 (19 %), стентирование пластиковым стентом — 22 (13 %) случая. Осложнения эндоскопической папиллэктомии имели место в 7 случаях и были такими: кровотечение — 4, острый панкреатит — 2, перфорация — 1. Коагуляция была использована для достижения гемостаза у 2 пациентов, наложение hemoclip — в 1 случае и ангиографическое пособие понадобилось у 1 пациента. Все случаи панкреатита лечили консервативно. В 1 случае перфорации была проведена операция. За время наблюдения (в среднем 30 мес.) 12 из 21 пациента (49 %) не имели рецидива, 5 имели рецидивные аденомы (средний период до прогрессирования — 27 мес.), двое умерли от болезней, не связанных с заболеванием. Все резидуальные опухоли были удалены при повторной эндоскопической процедуре.
Ключевые слова: эндоскопия, ампулярные опухоли, стентирование.

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Background. Ampullary adenomas are premalignant neoplasms and occur in about 0.04 to 0.12% of the general population based on autopsy series. Recently, endoscopic snare papillectomy has increasingly been used with curative intent for ampullary neoplasms.

Methods. Between January 2005 and October 2011, 230 patients with ampullary tumors underwent various surgical operations at our institute: pancreatoduodenectomy (Whipple procedure) — 45, transduodenal papillectomy — 29, palliative surgical operations — 78, endoscopic treatment — 165 cases. Endoscopic treatment of ampullary neoplasms was as following: endoscopic papillectomy — 21 (13%), suprapapillary choledochostomy — 91 (55%), nitinol biliary stenting — 31 (19%), plastic biliary stenting — 22 (13%) cases. En bloc resection of adenoma (< 3 cm) was performed in 10 patients, piecemeal removal (> 3 cm) — in 11 cases. Covered and uncoverd metal stents (1 cm × 6 cm) were used in 31 (19%) cases.

Results. Complications of endoscopic papillectomy occurred in 7 cases and were as follows: bleeding — 4, acute mild pancreatitis — 2, perforation — 1. Epinephrine spray and argon-plasma coagulation was used to attain hemostasis in 2 patients, hemoclip placement — in 1 case and angiographic management was necessary in 1 patient. All cases of pancreatitis were treated conservatively. In 1 case of perforation surgery was performed. During follow-up (mean 30 months) 12 of 21 patients (49%) had no recurrence, 5 — had recurrent adenoma (mean time interval to recurrence 27 months), two died of unrelated illnesses and 2 are awaiting follow-up. All residual tumors were eradicated by repeated endoscopic procedures.
Key words: endoscopy, ampullary tumours, stenting.

Introduction

Ampullary adenomas are premalignant neoplasms and occur in about 0.04 to 0.12% of the general population based on autopsy series [1; 2]. Surgical treatment of ampullary tumors includes palliative operations, transduodenal local resection and pancreaticoduodenectomy (Whipple procedure) [4]. In the early years endoscopic management consisted mainly of palliative treatment such as stent placement for obstructive jaundice. Recently, endoscopic snare papillectomy has increasingly been used with curative intent for ampullary neoplasms [3; 5].

Patients and Methods

Between January 2005 and October 2011 230 patients with ampullary tumors underwent various surgical operations at our institute: pancreatoduodenectomy (Whipple procedure) — 45, transduodenal papillectomy — 29, palliative surgical operations — 78, endoscopic treatment — 165 cases. Mean age was 62 years (range 27 to 86 years). There were 132 women and 98 men. Clinical presentation was as following: obstructive jaundice — in 82% patients, pancreatitis — 6%, cholangitis — 19%, gastrointestinal bleed-

ing — 8%, abdominal pain — 7%, asymptomatic — 9% cases. Diagnosis was confirmed preoperatively in all patients using ultrasonography, CT, MRI, EUS, endoscopy and biopsy. Endoscopic treatment of ampullary neoplasms was as following: endoscopic papillectomy — 21 (13%), suprapapillary choledochostomy — 91 (55%), nitinol biliary stenting — 31 (19%), plastic biliary stenting — 22 (13%) cases.

As endoscopic papillectomy became effective procedure in the treatment of ampullary tumors we want to represent our experience in the management of 21 patients.

The Technique of Endoscopic Papillectomy

Endoscopic papillectomy was performed in 21 cases. Papillary adenoma was in 13 patients, tubular adenoma — in 8 cases. Sedation consisted of carefully titrated doses of meperidine and/or midazolam with buscopan as necessary to inhibit duodenal motility. Continuous hemodynamic monitoring was employed, and all procedures were performed using the Olympus TJF-150 or TJF-130 videoduodenscopes with needle-type papillotomes, endoscopic snares and 40 W-s of blended diathermy current. Indications for endoscopic papillectomy were: tumor size less than 3 cm, no endoscopic evidence of malignancy, soft consistency to palpation with any device, benign histopathologic features in prior forceps biopsy specimens.

Features of unresectability were ulceration, friability, more than 50% lateral extension, obvious duodenal infiltration, and intraductal extension of more than 1 cm at ERCP. After performing duodenoscopy a cholangiogram and pancreatogram were obtained. A standard polypectomy snare using blended electrosurgical current was used to tighten around the lesion and transect it (Fig. 1, 2).

En bloc resection of adenoma (< 3 cm) was performed in 10 patients, piecemeal removal (> 3 cm) — in 11 cases. A dilute solution of epinephrine (1 : 10,000) was injected submucosally to elevate the tumor — in 5 patients. In 3 cases incision was made with needle knife circumferentially around the lesion to facilitate snare capture. A biliary sphincterotomy was performed with blended current, whereas the pancreatic sphincterotomy was done with pure cut current by using a monofilament papillotome. Endoscopic stenting of pancreatic duct was performed in 7 cases.

All tissue was retrieved and sent for histopathologic evaluation. If needed, thermal energy (argon plasma coagulation was used to treat any residual tissue. Endoscopic success was defined as complete excision of the tumor. All patients returned 4 to 8 weeks after the initial papillectomy for stent removal, routine biopsies, and further treatment, if needed. Follow-up was then performed at 3, 6, 12 and 24-month intervals.

Endoscopic choledochostomy was performed in 91 cases as follows: the intraduodenal segment of the distal common bile duct was identified by endoscopic examination as a bulge in the suprapapillary portion of the papilla. The distal common bile duct proximal to the cancerous tissue was then punctured with a neddle-knife by using pure coagulation electrosurgical current. When flow of bile through the choledochoduodenal fistula was noted then transfistula cannulation of the bile duct was attempted with the aid of guidewire. Then artificial fistula was extended by means of standard shincterotome or balloon dilation.

Plastic biliary stenting was performed in 22 (13%) cases. We used a stiff polyethylene inner catheter with radiopaque markers over a guidewire. Then the plastic biliary stent (10 F) was advanced over the complex guidewire-inner catheter using an outer pusher device as a three-layer system.

Covered and uncoverd metal stents (1 cm x 6 cm) were used in 31 (19%) cases (Fig. 3).

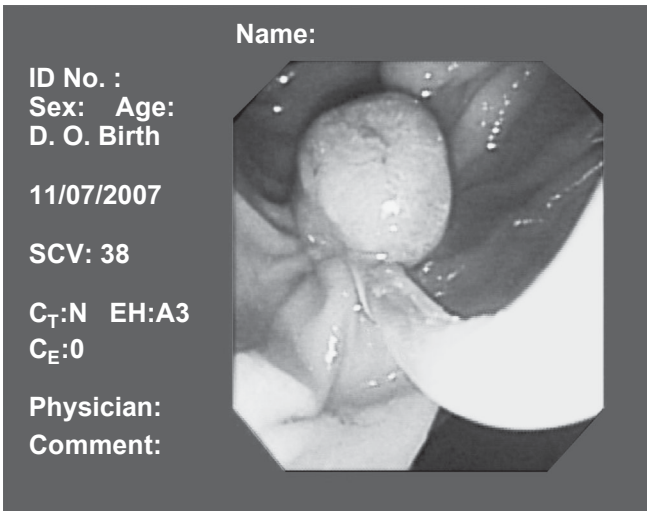

Fig. 1. Tumor capture with endoscopic snare

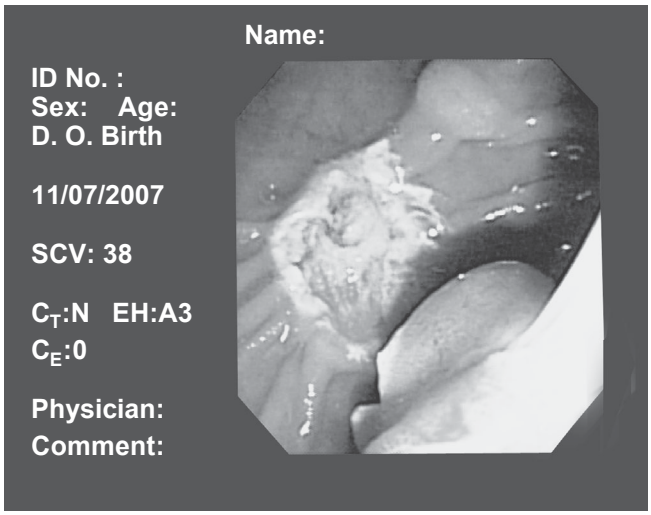

Fig. 2. Transsecting the tumor

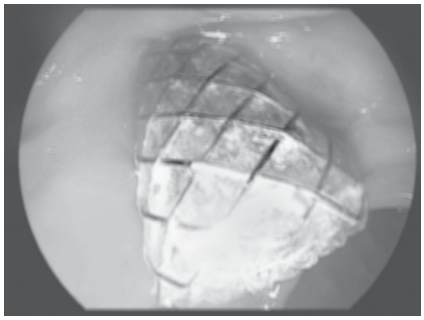

Fig. 3. Metal stenting of ampullary cancer

After biliary sphincterotomy, the length of each stricture was determined and the origin of the cystic duct insertion was noted in patients who had a gallbladder. The stent delivery system was advanced proximal to the stricture over a guide wire, where the stent was partially deployed and positioned within the stricture. When anatomically feasible stents were deployed so as to avoid occlusion of the cystic duct insertion, particularly in patients with a gallbladder.

Results and Discussion

Complications of endoscopic papillectomy occurred in 7 cases and were as follows: bleeding — 4, acute mild pancreatitis — 2, perforation — 1. Epinephrine spray and argon-plasma coagulation was used to attain hemostasis in 2 patients, hemoclip placement — in 1 case and angiographic management was necessary in 1 patient. All cases of pancreatitis were treated conservatively. In 1 case of perforation surgery was performed. During follow-up (mean 30 months) 12 of 21 patients (49%) had no recurrence, 5 had recurrent adenoma (mean time interval to recurrence 27 months), two — died of unrelated illnesses and 2 are awaiting follow-up. All residual tumors were eradicated by repeated endoscopic procedures.

Conclusions

(1) Endoscopic therapy appears to be a reasonable alternative to surgery for management of benign papillary tumors. (2) Papillary adenoma after endoscopic resection recurs in about a third of cases. (3) Recurrences are usually small and benign, and can be successfully treated endoscopically. (4) Further studies with long-term follow up are needed to determine the ultimate outcome of endoscopic treatment in patients with papillary neoplasms. (5) Metal biliary stenting is effective procedure in the treatment of unresectable cases.

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Submitted 17.07.2012

UDC 615.65-083.87-072.1-084:615-33

Tengcheng Li, Jun Pang, Jie Si-tu, Liao-yuan Li, Cheng Hu, Wen-tao Huang, Xin-qiao Wen, Jun-ming Zheng, Hao Zhang, Xin Gao

ANTIBIOTIC PROPHYLAXIS ON THE TIME OF CATHETER REMOVAL FOLLOWING LAPAROSCOPIC RADICAL PROSTATECTOMY

Department of Urology, The Third Affiliated Hospital,
Sun Yat-sen University, Guangzhou, 510630, China

UDC 615.65-083.87-072.1-084:615-33

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Department of Urology, The Third Affiliated Hospital, Sun Yat-sen University, Guangzhou, 510630, China

Objective. To assess the interaction between antibiotic prophylaxis and bacteriuria, leukocyturia after catheter removal following laparoscopic radical prostatectomy (LRP).

Patients and methods. A prospective randmized study enrolled 180 patients undergoing LRP, who were randomized either for receiving 7 days of prophylactic antibiotics starting at urinary catheter removal, or not. A urine specimen was collected for urinalysis on removal of the catheter, 1, 4 and