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CASE REPORT

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Primary Periampullary Adenocarcinoma of the Duodenum – Report of Two Cases

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Abstract

The duodenum is an infrequent site of neoplasms. Among the periampullary carcinomas, duodenal neoplasia is the least common type. This manuscript describes two cases of primary adenocarcinoma of the duodenum in the periampullary region, with similar clinical manifestations, both surgically treated with pacreaticoduodenectomy.

Introduction

Tumors of the small intestine are rare entities, accounting for about 2% of all tumors of gastrointestinal origin. These include both malignant (adenocarcinoma, carcinoid, lymphoma, or sarcomas) and benign (adenoma, leiomyoma or lipoma) tumors. The duodenum occupies only 8% of the length of the small intestine. Adenocarcinoma is the predominant histological type of duodenal neoplasias. Of these, 65% are periampullary. Among the periampullary tumors (pancreas, papilla, bile duct and duodenum), duodenal carcinoma is the least frequent [1-4]. Here, we report two similar cases of periampullary adenocarcinoma of the duodenum carried out by our own staff.

Case Reports

Case 1

A 49-year-old, Caucasian obese woman, presented with pain in the right upper quadrant aggravated by eating. This was accompanied by nausea, postprandial fullness, anorexia, asthenia, and progressive jaundice without fever. Ultrasonography and abdominal tomography revealed hepato-choledochal dilatation. In the distal portion of the duodenum, there was a solid nodular formation, approximately 2.2 cm, with no evidence of adenopathy or metastasis. Upper endoscopy revealed a polyp greater than 2 cm in the duodenal papilla, which on biopsy was determined to be an adenocarcinoma (Figure 1). She reported a history of duodenal tubular adenoma with high grade dysplasia at the same site, removed by duodenotomy during previous a cholecystectomy, 6 years prior to presentation.

Case 2

A 53-year-old Caucasian man presented with a history of jaundice and pain in the right hypochondrium for 2 months, and weight loss for almost 1 year, of increasing severity. On physical examination, he was jaundiced and had an enlarged and palpable gallbladder. Ultrasound and abdominal tomography showed a periampullary nodule of approximately 2 cm with pancreatic and biliary ductal dilatation proximally, without adenopathy or metastasis. He denied antecedents or comorbidities and had not undergone previous endoscopy.

Outcome

After preoperative evaluation and surgical risk assessment, both patients underwent duodenopancreatectomy with preservation of the pylorus and reconstruction with manual end-to-end pancreatojejunal and lateral choledocojejunal anastomosis, without transoperative intercurrences. Neither underwent prior drainage of the bile duct. Anatomopathological analysis confirmed the diagnosis of moderately-differentiated adenocarcinoma originating in the duodenal mucosa, with invasion of the papilla and free surgical margins, in both cases (Figures 2-6).

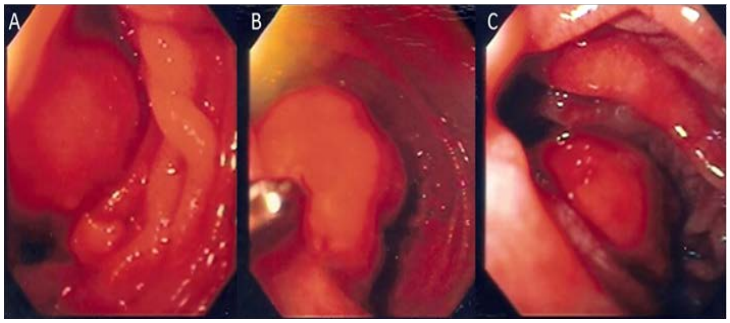

Figure 1. Duodenal endoscopic images of Case 1

Discussion

A The diagnosis of small bowel tumors is often difficult due to the rarity of these lesions. Periampullary tumors are neoplasms that arise in the vicinity of the ampulla of Vater. They can originate from the pancreas, distal common bile duct (CBD), the structures of the ampullary (ampulla of Vater) complex, or the duodenum (the rarest type)[1-6].

In addition to sharing a rare disease, these two patients had very similar clinical findings, characteristic of periampullary tumors. Patient 1 did not present with a palpable gallbladder on physical examination because she had undergone a previous

cholecystectomy for cholelithiasis. Our treatment of choice in such a situation is pancreaticoduodenectomy. This is required for tumors involving the first and second portions of the duodenum. However, some surgeons prefer pancreaticoduodenectomy to wide local excision for all duodenal adenocarcinomas because of its more radical clearance of the tumor bed and regional lymph nodes. In addition, for localized adenocarcinomas of the first and second portion of the duodenum, there is a grade 1B recommendation to perform pancreaticoduodenectomy rather than segmental resection. We opted to operate on Case 2 without previous endoscopy for the initial suspicion of neoplasia of pancreatic origin, in view of its higher incidence and its clinical history. Pancreaticoduodenectomy would be a better option for both diagnoses [2,4,7,8].

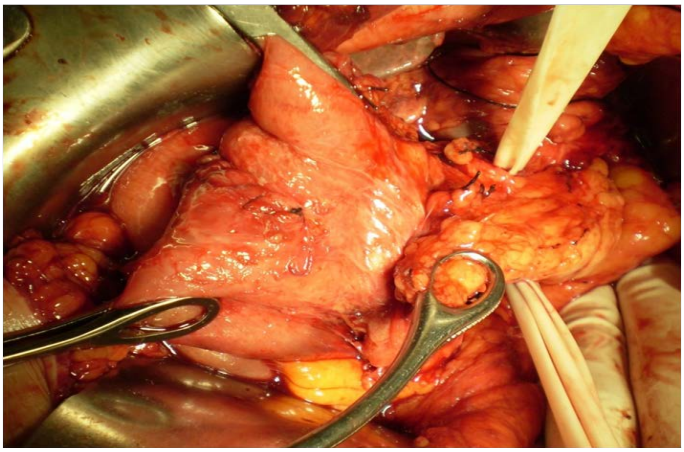

Figure 2. Pancreaticoduodenectomy of Case 1

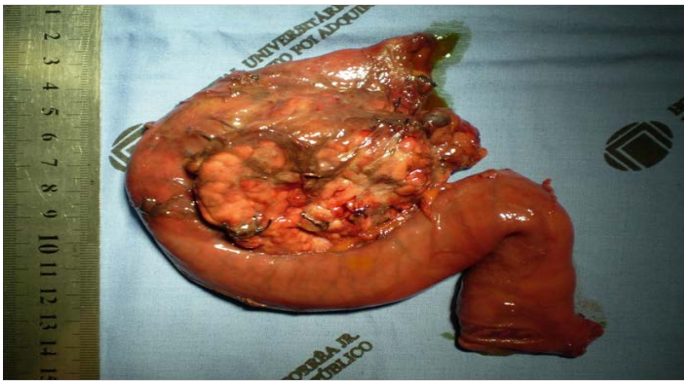

Figure 3. Surgical specimen from Case 1

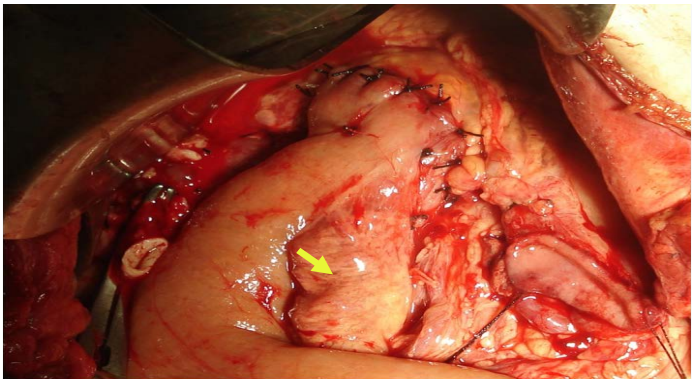

Figure 4. Pancreatojejunal anastomosis in Case 2

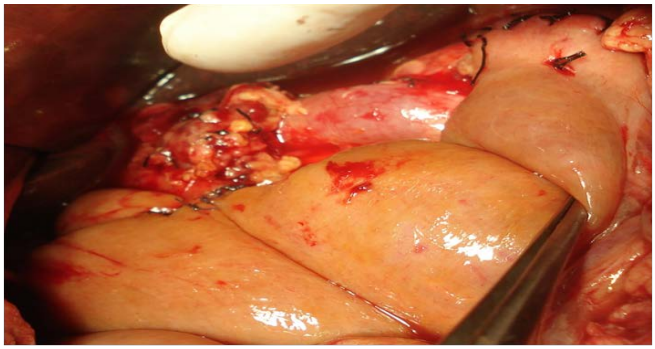

Figure 5. Choledocojejunal anastomosis in Case 2

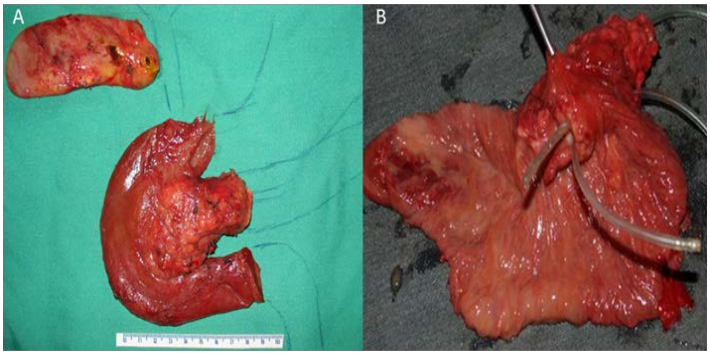

Figure 6. Surgical specimen from Case 2

The initial symptoms are usually vague and nonspecific, making early diagnosis difficult. Symptoms evolve to obstructive jaundice with dilatation of the biliary tract and gallbladder. Radiological and endoscopic examinations suggest the diagnosis and the pathology confirms it. Surgical treatment is most appropriate and is the only option that offers a chance of cure [1-4].

Conclusion

Duodenal adenocarcinoma is a rare and potentially curable condition, especially in early cases.

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