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Solid-Pseudopapillary Tumor of the Pancreas: Case Report and Literature Review

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Abstract
Solid-Pseudopapillary Tumor of the Pancreas are rare tumors usually affecting young women. Our aim was to report two cases of Solid-Pseudopapillary Tumor of the Pancreas and to review the literature on the subject. The first case was a 23-year-old young woman with a high economic status who had consulted for abdominal pain. The diagnosis of a Solid-Pseudopapillary Tumor of the Pancreas was suspected due to the radiological characteristics of the tumor (ultrasound and abdominal Computed tomography) and confirmed by the histology of the surgical specimen. She went through cephalic pancreaticoduodenectomy surgical operation. The evolution was satisfactory with one year of abdominal Computed tomography follow-up showing no recurrence. The second case was a 34-year-old young woman with a low economic level who had consulted for recurrent epigastric pain. The diagnosis of a Solid-Pseudo papillary Tumor of the Pancreas was retained on the basis of clinical and scannographic criteria. A surgical intervention was proposed but refused by the patient. A surveillance of Computed tomography was proposed afterwards. Solid-Pseudopapillary Tumor of the Pancreas are rare pathologies. Complete surgical resection provides a good prognosis.

Keywords: Solid-Pseudopapillary Tumor of the Pancreas, Diagnosis, Surgical Resection, Pancreas

1. Introduction
Solid-Pseudopapillary Tumor of the Pancreas (SPTs) are rare tumors. They represent less than 2% of exocrine pancreatic tumors [1]. They mainly affect young women [2, 3]. The main treatment remains surgical resection with a favorable prognosis [4]. We report two cases of Solid-Pseudopapillary Tumor of the pancreas.

2. Observations
1st Observation
This was a 23-year-old woman presenting with progressive epigastric pain without accompanying symptoms and associated with a radiological image in favor of a cyst of the head of the pancreas. The patient had initially benefited from a cysto-jejunal shunt in our country. However, the symptoms persisted after 7 months postoperatively, motivating the realization of other explorations. The abdominal Ultra sound showed a large cystic lesion in the head of the pancreas. Abdominal CT scan showed a 6 cm pancreatic mass, some lymph nodes in the right iliac fossa, without vascular invasion. A neuroendocrine tumor of the head of the pancreas was suspected. Thus, the patient had undergone a second operation of cephalic duodenopancreatectomy. The histology of the surgical specimen reported a Solid-Pseudopapillary Tumor of the Pancreas of 50mm long axis extended to the peripancreatic conjunctivo-adipal tissue without duodenal invasion. The sampling of 36 lymph nodes was free of tumor lesion. The lesion was classified as Pt3Pn0 according to UICC 8th edition. The diagnosis of a Solid-Pseudopapillary Tumor of the pancreatic head was retained. The patient had undergone regular clinical and paraclinical surveillance. The scannographic evolution at one year after surgery did not report any recurrence of the tumor lesion.

2nd observation
This was a 34-year-old woman who had consulted for recurrent vague abdominal pain associated with asthenia. The patient had no particular history. The physical examination reported an epigastric tenderness. The biological examination showed an erythrocyte sedimentation of 115 mm, a C-Reactive Protein of 9.1 mg/L with a normal liver and lipase levels (44U/L). Abdominal Computed tomography showed a large cystic mass, about 9 cm in diameter, homogeneous and well limited at the

expense of the body and tail of the pancreas (Fig 1). The diagnosis of a Solid-Pseudopapillary Tumor of the Pancreas was made on the basis of clinical (female, young age and epigastric pain) and scannographic (large cyst of the pancreas) evidence. A surgical intervention had been proposed but refused by the patient. A regular scannographic and clinical surveillance was proposed afterwards.

3. Discussion

Solid-Pseudopapillary Tumor of the Pancreas is a rare pathology. It represents less than 2% of exocrine pancreatic tumors and less than 5% of cystic pancreatic tumors [1]. This tumor usually occurs in young women with an average age of 28 years, which was our case [5]. The clinical signs are not very specific and dominated by the presence of abdominal pain or an abdominal mass. The discovery circumstances are very variable. It can be discovered by chance during an imaging procedure for another reason or in front of a palpable abdominal mass or during the exploration of abdominal pain, as in the case of our patients who complained of recurrent epigastralgia [3]. Rarely, it is revealed after an abdominal trauma or during a complication (rupture or intra-tumoral haemorrhage) or in front of digestive or biliary compression signs or vascular structure [3, 6].

Radiological examinations such as abdominal ultrasound, computed tomography (CT) and magnetic resonance imaging (MRI) allow the description of a well limited mass with little vascularity and a mixed component associating solid and cystic zones. CT and MRI can show hemorrhagic foci and a fibrous capsule [4, 7]. The location of the tumor remains variable (head, body and tail) with a body-tail of the pancreas predominance [4, 8, 9]. In our first case, the localization was in the head of the pancreas and body tail of the pancreas for the second.

Histology remains the gold standard to confirm a Solid-Pseudopapillary Tumor of the Pancreas showing a tumor proliferation consisting of polygonal or cubic monomorphic cells. Immunohistochemistry confirms the diagnosis. Tumor cells express vimentin, alpha-1-antitripsin and NSE in 90% of cases [10].

CT or MRI data combined with age and gender should be sufficient to indicate surgical intervention, as in our first case, and a preoperative percutaneous biopsy, could be performed in case of doubt [11], despite the risks of tumor dissemation;

Surgical resection is the only curative treatment. The type of surgery depends on the size and location of the tumor, either a partial or total pancreatectomy [4, 8]. In our first case, the patient went through cephalic duodenopancreatectomy.

Prolonged surveillance (ultrasound and abdominal computed tomography) should be systematically performed to look for locoregional or metastatic recurrence. The recurrence rate is not negligible, reaching 10 to 15% [4, 12]. The prognosis of a Solid-Pseudopapillary Tumor of the Pancreas remains favorable, especially after complete excision surgery [4, 8].

4. Conclusion

Solid-Pseudopapillary Tumor of the Pancreas is rare and occurs mainly in young women. The diagnosis should be evoked in front of a solid and cystic mass of the pancreas and confirmed by the histology of the operative part. The prognosis remains favorable after complete surgical resection.

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