Laparoscopic treatment of a cephalic pancreatic leiomyoma

Traitement laparoscopique d'un léiomyome de la tête du pancréas

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RÉSUMÉ

Introduction: Le léiomyome du pancréas est une tumeur exceptionnelle. La présentation clinique est celle d'une masse pancréatique. En dépit de l'absence de signes spécifiques, l'imagerie préopératoire garde une place pour guider la décision thérapeutique. Le traitement curatif est la résection chirurgicale. L'étude anatomopathologique avec immunohistochimie permet de retenir le diagnostic définitif de léiomyome.

Observation clinique: Nous avons eu à prendre en charge une patiente de 52 ans, qui s'est présentée suite à la découverte fortuite d'une mase de la tête du pancréas. L'imagerie préopératoire n'a pas mis en évidence d'argument en faveur de la malignité. Ainsi, la patiente a eu une énucléation par voie laparoscopique avec des suites opératoires simples. L'étude anatomopathologique de la pièce opératoire a conclut à un léiomyome.

Conclusion: Le diagnostic préopératoire de léiomyome pancréatique est difficile. La présentation clinique est celle d'une masse pancréatique. Le but de l'imagerie préopératoire est de mettre en évidence des signes de dégénérescence. La laparoscopie trouve une indication de choix pour les lésions bénignes. L'énucléation est une option thérapeutique envisageable en dehors de ses contre-indications. Elle permet un geste curatif tout en assurant une épargne du parenchyme pancréatique.

Mots-clés

Léiomyome, pancréas, laparoscopie, énucléation

SUMMARY

Background: Leiomyoma of the pancreas is very rare. Symptoms and signs are not specific. It has the clinical presentation of a pancreatic mass. The preoperative clinical and radiological assessments are fundamental to establish a therapeutic schema. The curative treatment is surgical resection.

A methodical histological examination is required to confirm the final diagnosis of Leiomyoma.

Case report: A 52-year-old female patient presented with a mass of the head of the pancreas. After preoperative assessment, the patient had laparoscopic enucleation. Postoperative course was no remarkable for complications. Pathology examination concluded to leiomyoma.

Conclusion: Preoperative diagnosis of pancreatic leiomyoma is difficult. It has the features of a pancreatic mass. The preoperative assessment aims to identify signs of malignancy. In its absence, laparoscopy is feasible and safe. Enucleation, if indicated, is a surgical option for a benign disease sparing the patient a pancreatic resection.

Key-words

Leiomyoma, pancreas, laparoscopy, Enucleation

Gastro-intestinal leiomyomas are rare tumors of conjunctive tissues. Leiomyomas of the pancreas are exceptional. Only three cases have been reported.
Herein, we present the fourth case of primary leiomyomas of the head of the pancreas. We describe the unusual clinical and radiological presentation and we discuss the usefulness of laparoscopic surgery in such situation for both intraoperative exploration and surgical resection.

REPORTED CASE

A 52 year-old female patient presented to the outclinic department after a fall of her own height. Her past medical history was remarkable for a cesarean section. The physical examination was normal. Routine laboratory tests were normal.
Abdominal ultrasound showed a 2 cm retroperitoneal mass that was hypoechoic, having a slight contact with the head of the pancreas and the inferior vena cava.
On CT scan, we found a retroperitoneal solid mass measuring 3 cm between the posterior side of the head of the pancreas and the inferior vena cava. This tumor is spontaneously isodense to the pancreatic parenchyma but enhances highly in the arterial phase after IV contrast injection (figure 1). Nor lymph node enlargement nor signs of metastasis were present.

Figure 1: CT scan showing a 3 cm tumor of the head of the pancreas (red arrow) and MRI showing a hyperintense mass of the head of the pancreas in T2 weighted images (blue arrow)

MRI had confirmed the posterior localization in the head of the pancreas. The lesion was hyperintense on T2 weighted images. On T1 weighted-images, the lesion was hypointense with a high arterial phase enhancement after Gadolinium injection. The wirsung duct and the common bile duct were not dilated (figure 1). Specific neuroendocrine tumor markers and Octreoscan were normal. Thus, the tumor showed no specific features on imaging techniques. Based on these findings, a preoperative diagnosis of the pancreatic mass was not possible. Surgery was indicated to not misdiagnose an underlying malignancy.

The patient underwent laparoscopy. For the trocars placement, we used a 10mm port in the umbilicus for the camera, a 10mm suprapubic port and a 5 mm port in the lower quadrants. After the opening of the distal portion of the mesentery root, we proceed with a retromesenteric approach until the identification of the duodenal genu inferus. Then, we performed the Kocher maneuver to dissect the duodenum and the pancreas from the inferior vena cava. Progressively, we have been able to visualize the tumor: a rounded encapsulated lesion belonging to the posterior side of the head of the pancreas (figure 2). In view of the preoperative imaging, the distance between the main pancreatic duct and the tumor was superior to 1 cm. Enucleation was performed using ultracision. Postoperative course was unremarkable for complications. The patient was discharged 6 days after surgery.

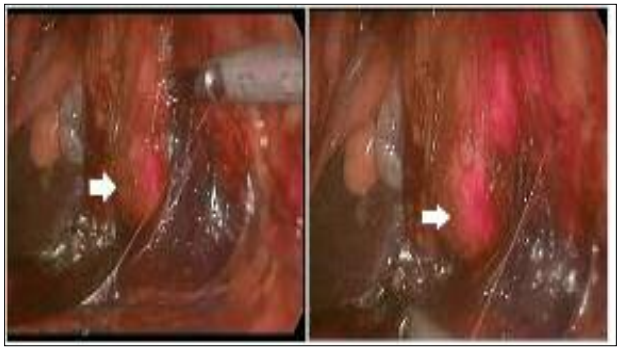

Figure 2 : Intraoperative view Tumor of the posterior side of the head of the pancreas (white arrows)

Pathology examination (figure 3) found benign mesenchymal proliferation arranged in intersecting beams. The cells are spindle equipped with abundant eosinophilic cytoplasm and regular fine chromatin elongated core. There was no mitosis or necrosis.
Immunohistochemistry performed with anti-actin antibody, Coldismone, CD117, and PS 100 DOG1 was only positive for actine. All other markers were negative, concluding to a leiomyoma of the pancreas.

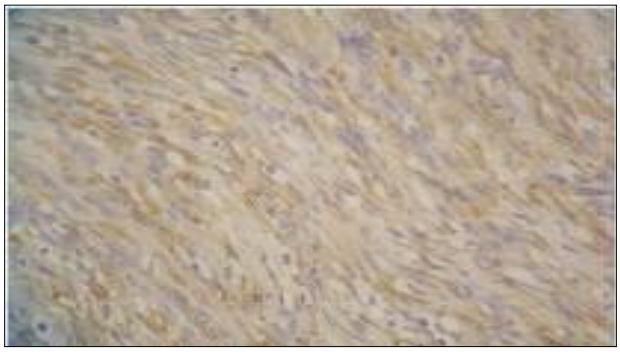

Figure 3: Intraoperative view Tumor of the posterior side of the head of the pancreas (white arrows)

DISCUSSION

Pancreatic leiomyoma is exceptional (1). Three cases have been reported in the literature: a woman of 72 years who underwent enucleation and one patient of 52 years who had a pancreaticoduodenectomy. Both patients underwent laparotomy (2,3). For the third case, the diagnosis of primary leiomyoma of the head of the pancreas was established after an endoscopic ultrasound-guided fine needle aspiration (EUS-FNA). Based on these findings, surgical resection was not carried out (4). Preoperative imaging investigations confirmed the pancreatic origin of the mass. It was located far from the duodenal papilla and the Wirsung duct. The laparoscopic approach has not been used in the two surgical cases previously reported in the literature. We considered laparoscopy as an excellent indication in this case because no clinical or radiological signs of malignancy were found in the preoperative assessment. It allows the exploration for liver metastasis or peritoneal carcinomatosis. It evaluates the size of the tumor, its consistency, its involvement with adjacent organs and allows the identification of lymph nodes.

In our case, we decided to perform an enucleation of the tumor. The mass was far for the wirsung duct with no signs of malignancy. Rather than performing a Whipple procedure, this surgical option was reasonable considering that we were dealing with a benign disease.

The mesenchymal proliferation expressing actin points towards the diagnosis of leiomyoma. Negativity of immunohistochemistry with anti-DOG 1 and anti-CD117 antibody has eliminated the diagnosis of GIST. Negativity of the expression of PS 100 protein dismissed the diagnosis of schwannoma.

The clinical and radiological presentation, the absence of preoperative and intraoperative signs of malignancy with the absence of mitosis and necrosis were arguments to rule out the diagnosis of leiomyosarcoma (5)

CONCLUSIONS

The preoperative diagnosis of pancreatic leiomyoma is difficult. Clinical manifestations and radiological features are not specific. With a wise preoperative assessment ruling out all signs of malignancy and locating the tumor far from the mean pancreatic duct, enucleation of the tumor can be feasible either by laparotomy or laparoscopy. Histological diagnosis is based on immunohistochemistry.

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