

Pancreatic incidentalomas: is laparoscopic approach safe and feasible?

Pancreatic incidentaloma is an asymptomatic incidentally lesion detected on a radiologic imaging performed for unrelated indication. This definition has been proposed for adrenal mass but actually the term is used for asymptomatic masses discovered in different solid organs such as pituitary gland, kidney, liver, prostate and pancreas. Its incidence is increasing because of the widespread use of cross-sectional imaging. The small size of lesions and the location in the body and tail of the pancreas could give reason of the lack of symptoms for left-sided locations. Pancreatic incidentalomas (PIs) include a variety of benign, premalignant, malignant lesions, and unusual histotypes are frequently encountered.

Specific guidelines for diagnosis and treatment of PIs are lacking and consequently their diagnostic assessment and clinical management is still debated.

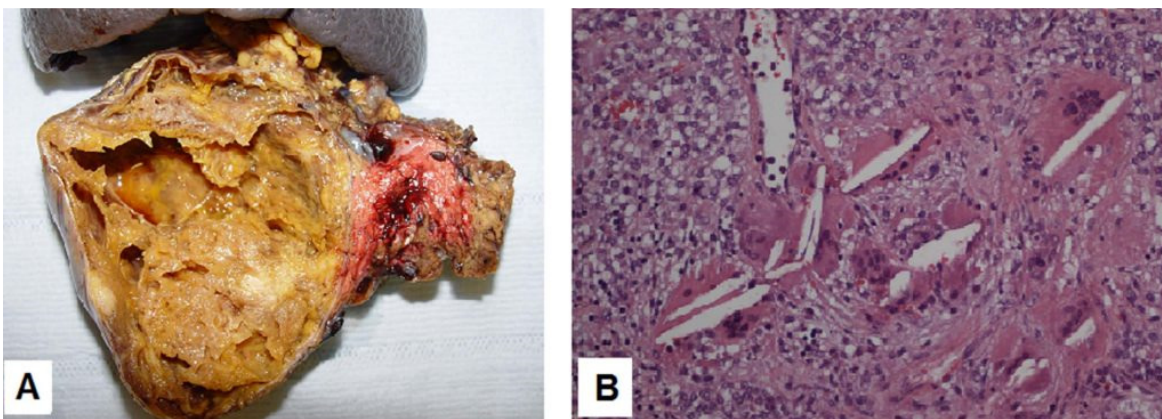


Fig. 1. A. Surgical specimen of distal pancreatectomy containing a 9.5 cm large encapsulated pancreatic tail mass with areas of cystic degeneration. The histological diagnosis was solid pseudopapillary neoplasm.

B. The microscopic pattern of the neoplasm is solid and pseudopapillary with poorly cohesive monomorphic cells, admixed with thin-walled blood vessels. In the center of the image there are the characteristic cholesterol crystals, surrounded by foreign-body giant cells (hematoxylin-eosin; magnification 200X).

Currently, intravenous contrast-enhanced multidetector CT is considered the pivotal radiologic technique for the detection and staging of pancreatic tumors allowing the definition of size, localization, texture (solid or cystic), and vascularization of the mass. Magnetic resonance imaging and endoscopic ultrasonography should be performed selectively.

Endoscopic ultrasound (EUS) with fine-needle aspiration has become increasingly used in the differential diagnosis of pancreatic masses. This exam provides high-resolution images of the pancreas and it presents a relevant sensibility and specificity for the solid lesions of the pancreatic head.

PIs could be categorized into solid and cystic lesions. Cystic PIs frequently present a benign or premalignant nature while solid PIs are usually considered malignant tumors.

Surgical resection is the standard treatment for asymptomatic pancreatic solid lesions. Conversely, the management of cystic PIs is complex due to the high rate of benign lesions. Size > 3 cm, main duct dilatation > 10 mm, presence of mural nodules and cytology suspicious for malignancy are indications for surgery.

Pancreatic ductal adenocarcinoma (PDAC) and pancreatic neuroendocrine tumors (PNET) are the most frequent histotypes detected in solid PIs. PNET represent 2% of all pancreatic malignancies and their incidence has increased in the past decades. Even if recently a non-operative management has been proposed for incidentally discovered small (< 2 cm) non-functioning PNET, the majority of the authors suggest that these lesions should be treated surgically. Acinar cell carcinoma (ACC) is a rare pancreatic malignancy composed by uniform malignant cells arranged in small glandular units secreting low quantities of exocrine enzymes. Prognosis of ACC seems to be slightly better than PDAC although 5-year survival rate is low and surgical resection is always indicated.

Serous cystic neoplasm (SNC) is considered a benign lesion and a conservative approach is indicated. Surgery should be performed in case of large tumours (size > 4 cm) or when preoperative exams are not exhaustive. Mucinous cystic neoplasms (MCN) and intraductal papillary mucinous neoplasms (IPMN) are frequently incidental. Peripheral calcifications, irregular septa, intramural nodules or dilatation of the main duct are radiological findings associated with malignancy. Surgical resection is mandatory for MCN, main duct type IPMN and branch duct type IPMN greater than 3 cm. Solid pseudopapillary neoplasm (SPPN) is an infrequent solitary large mass consisting of a solid component alternating cystic spaces with low malignant potential; surgical resection is considered the choice for this lesion.

Laparoscopic distal spleno-pancreatectomy (LDSP) should be the standard treatment for malignancies located in the body and tail of the pancreas.

Laparoscopic distal pancreatectomy with splenic preservation is a surgical technique proposed for pancreatic distal benign and premalignant lesions. It is associated with reduced incidence of postoperative and long-term sepsis but can be complicated by splenic infarction. For peripheral solitary small (< 2 cm) lesions surgical enucleation could be performed, although this procedure is associated with a high incidence of postoperative pancreatic fistula and it does not guarantee a radical resection in case of malignancy. Laparoscopic pancreatic surgery was introduced for PDAC staging but subsequently it was used also for pancreatic resections. Laparoscopic distal spleno-pancreatectomy is currently considered an effective treatment for benign and low grade malignant lesions of distal pancreas. However it is still debated if LDSP is an effective treatment for malignant lesions. At the present there are not clinical trials comparing long-term results between laparoscopic or open approach for PDAC. Consequently no definitive conclusions can be drawn about oncologic outcomes. However, the meta-analysis show that the pathologic parameters of oncologic radicality, tumor free-margins and number of lymph nodes dissected are comparable for both techniques. According to the literature, LDP presents lower blood loss, shorter time to oral intake and reduced length hospital stay as compared to open technique, while the rate of pancreatic fistula are similar for the two surgical techniques.

When a pre-malignant cystic lesion or a small solid malignant mass is present the laparoscopic distal pancreatectomy and en bloc splenectomy with regional lymph nodes dissection is indicated. The presence of

lymph nodes involvement and infiltration of surrounding tissues at preoperative work-up should be considered contraindications to laparoscopic approach.

In our series the conversion to open surgery was determined by the intraoperative detection of pancreatic masses of considerable size and the intra-operative suspicion of infiltration of the surrounding tissues. The incidence of postoperative fistulas and new-onset diabetes were similar with the literature data.

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Publication

[Left-sided pancreatic incidentalomas treated with laparoscopic approach: a report of 20 cases.](#)

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