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clinical practice

Importance of a careful clinical evaluation in the diagnosis of cystic pancreatic tumors

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SUMMARY: **Importance of a careful clinical evaluation in the diagnosis of cystic pancreatic tumors.**

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Introduction. *Intraductal papillary mucinous neoplasms (IPMN) are a rare group of pancreatic neoplasms. Often are asymptomatic and, when are symptomatic, patients complain sensation of weight in the abdomen or compression at the neighboring structures. In many cases the diagnosis is incidental, during a CT or MR performed for other raisons.*

Case report. *We report a case of a 59-year-old woman with diagnosis of post-pancreatitis pseudocyst who, instead, was affected by an intraductal papillary mucinous neoplasm (IPMN), treated by us with pancreatoduodenectomy.*

Discussion. *The diagnosis of IPMN has increased in recent years thanks to an improvement in radiological investigation. The study of pancreatic lesions must be very careful and it is absolutely necessary that diagnostic imaging be accompanied by a correct clinical evaluation of the patient.*

Conclusion. *A thorough anamnesis is required in patient with history of acute pancreatitis to avoid the mistake of exchanging an IPMN for a pseudocyst.*

KEY WORDS: Case report - IPMN - Clinical evaluation - Pancreatic tumors - Diagnostic strategy.

Introduction

The widespread use of diagnostic imaging has increased the diagnosis of cystic tumors of the pancreas, and this fact is very frequent during diagnostic exams performed for non-pancreatic diseases (2). Even if the lesion is incidentally found, it is important to obtain an exact diagnosis of these lesions, because the evolution of the various types of cystic tumors – serous cystadenoma, mucinous cystadenoma and intraductal papillary mucinous neoplasm (IPMN) – is quite different because there are benign tumors (serous cystadenoma) and potentially malign tumors (mucinous cystadenoma and IPMN) (2-4).

The utilization of the diagnostic exams is essential to establish the type of cystic tumor and obtain useful parameters in order to determine a correct therapeutic protocol. However, we would like to underline that a careful clinical evaluation together with an exhaustive anamnesis are also useful and in our opinion should be an important step to get a diagnosis as in a case that we recently treated (5, 6).

Our paper is in line with the SCARE criteria (1).

Case report

A woman, 59-years-old, complained dyspeptic symptoms with irregular episodes of nausea and vomiting. There was a slight rise of levels of amylase and lipase. Pain was provoked by palpation in epigastrium and mesogastrium. Ultrasound showed the presence of a cystic mass in the head of the pancreas. Two years before the patient had an episode of acute pancreatitis and had been hospitalized in an emergency department for some days. A computed tomography (CT) (Figure 1) had showed the presence of a cystic

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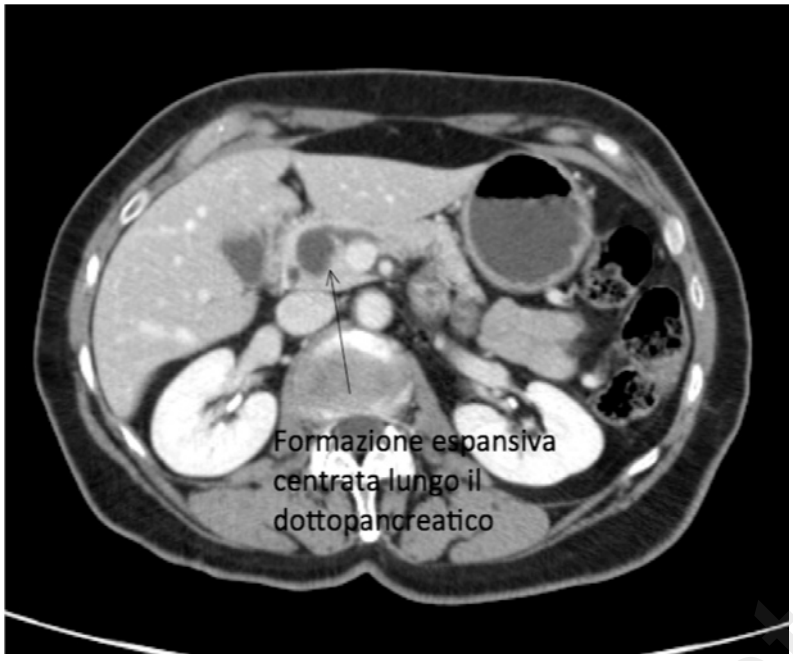

Figure 1 - CT scan image shows an expansive cystic lesion along the pancreatic duct.

lesion that had been explained as a post-pancreatitis pseudocyst. About one week after the patient has been discharged and has been in good health.

After a careful evaluation of the anamnestic data we had some doubts about the diagnosis of pancreatic pseudocyst that, in our opinion, had been too hurried. That episode of acute pancreatitis was the first one for that patient and there had been no enough time for the development of the pseudocyst that usually requires about six weeks from the onset of the acute pancreatitis. Furthermore the patient did not complain of biliary lithiasis, she did not drink alcoholic beverages and did not have dyslipidemic disorders.

These reflections gave rise to the suspicious presence of a cystic tumor of the pancreas. The patient underwent a correct diagnostic evaluation (Figure 2) that showed the presence of an IPMN in the head of the pancreas. It has been essential the execution of an endoscopic ultrasonography (Figure 3) that collected mucin from the cystic lesion and cellular content. The patient underwent a pancreatoduodenectomy that confirmed the presence of a borderline IPMN with free margins at the level of the pancreatic section (Figure 4). The patient has had a periodic follow-up – CT and/or magnetic resonance (MR) every year – and is disease-free after seven years from surgery.

Discussion

The diagnosis of a cystic tumor of the pancreas is considerably increased and the widespread use of CT and MR in patients studied for different diseases has determined in many cases the incidental diagnosis of these cystic lesions. Not always the treatment of the patients with a cystic tumor of the pancreas is certain, there are frequently some uncertainties about the correct treatment, sometimes it is not easy to distinguish between a serous and a mucinous tumor or between a benign and a borderline or malign tumor (2, 3, 5, 7).

A correct diagnostic iter to identify cystic lesions of the pancreas includes a variety of imaging modalities, such as CT, MR, somatostatin receptor scintigraphy (SRS), PET, endoscopic ultrasound (EUS) and angiography with selective arterial stimulation and venous sampling (8-10).

CT is the most common initial imaging study in the evaluation of the patients with cystic pancreatic lesion with a sensitivity from 62 to 83% and a specificity of 83-100%, so limited data are available for detailed analysis of the CT appearance (9, 10).

MR is a second line step in cystic pancreatic lesions. The MR signal is low in T1-weighted sequences and high in T2-weighted sequences, with a sensitivity and a specificity of range from 75-100%. In particular,

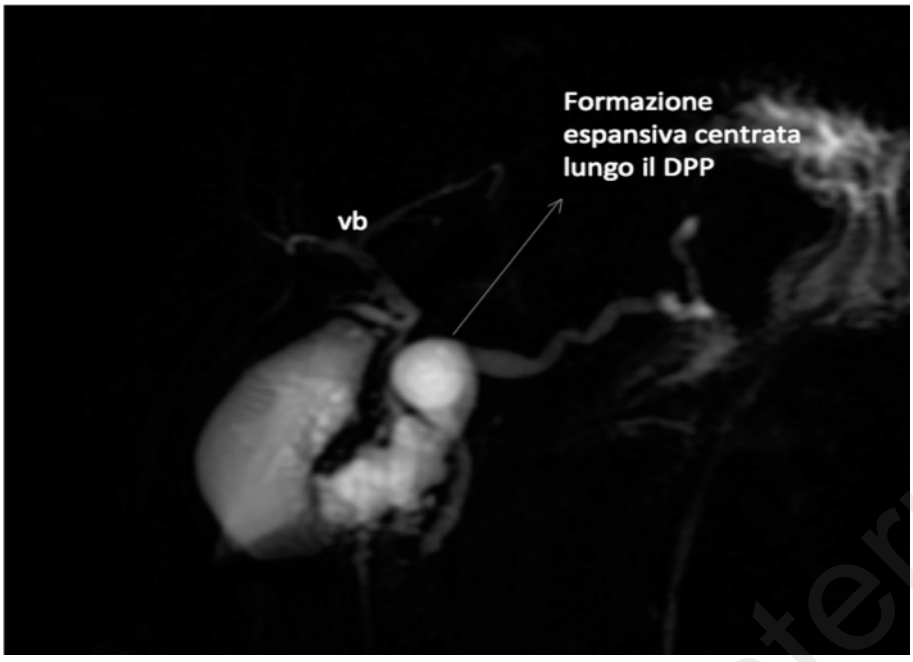

Figure 2 - MR image. Sagittal projection shows the cystic lesion.

Figure 3 - Ecoendoscopy image.

its chosen is indicated when lesions are too small to be visualized on CT and seems to be superior to CT in detecting and following liver metastases (8, 11, 12).

Instead, SRS, PET and angiography are indicated in case of suspected cystic PNETs (12, 13).

EUS combines both endoscopic and ultrasound examination into a single modality and has became indispensable diagnostic technique in the evaluation of pancreatic lesions and offers the additional benefit of obtaining biopsies and cyst fluid examination providing additional pathological findings. EUS has a 82% sensitivity and 92% specificity and is more sensitive, until 97%, when lesion is located in the head of the pancreas and presents a size of range 2-6 cm (14).

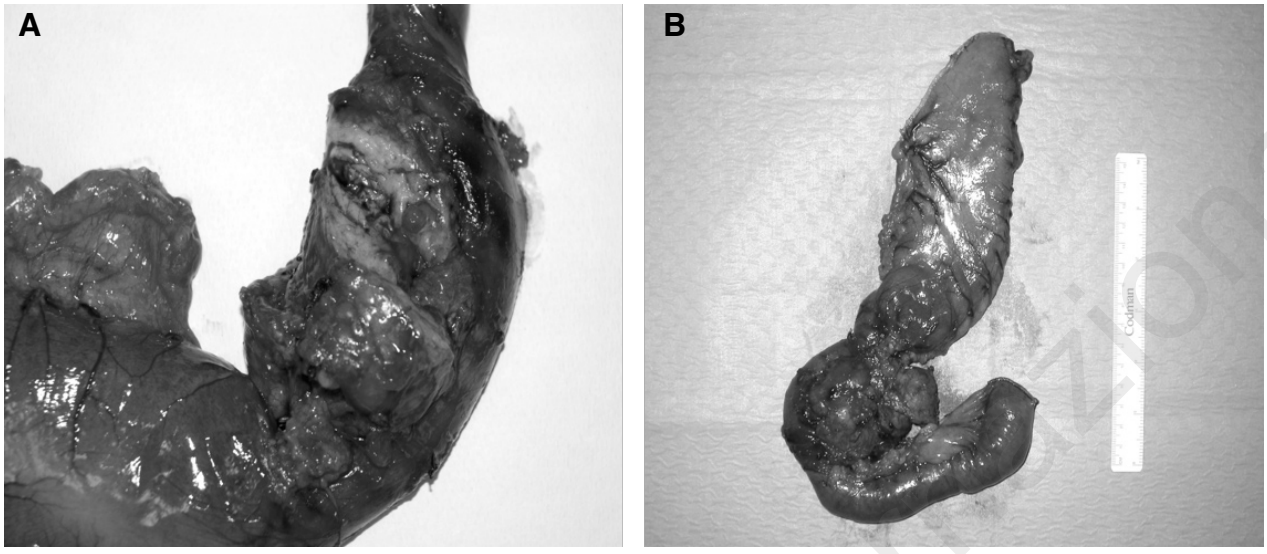

Figure 4 A, B - Intraoperative image of the pancreaticoduodenectomy.

A diagnostic strategy for these patients is mandatory, a pancreatic resection should be avoided when the tumor is benign, because even though mortality after pancreatic resection in dedicated centers is low in comparison with results reported some years ago, mortality in low-volume centers is still high and morbidity rates remain high (about 40%) even in high-volume centers (1, 4).

Even though the available diagnostic studies are essential to obtain a correct diagnosis in a patient with a cystic tumor of the pancreas before planning a rational surgical approach, in our opinion a clinical evaluation of these patients with the careful collection of all the anamnestic data, represents an important moment that we should not have to underestimate.

Conclusions

According to AIOM guidelines we underline that in patients with cystic pancreatic lesions, also accidental ones, compatible with intraductal mucinous cystic neoplasms (IPMN) of the main pancreatic duct, those of mixed type (IPMN of the primary pancreatic duct associated with IPMN of the secondary pancreatic duct), with signs of high neoplastic risk, IPMN of the secondary ducts with signs of high neoplastic risk and signs of alarm and mucinous cystadenenomas, surgery should be considered as the first therapeutic option. Also, monitoring by imaging techniques is envisaged for the IPMNs of secondary ducts without clinical and radiological signs compatible with the development of cancer and warning signs and should be continued until the patient is operable. Moreover, an intensification of follow-up should be considered after 5 years.

In our reported case the clinical evaluation has been very useful, because it allowed us to esteem the anamnestic acute pancreatitis as a part of the clinical picture of a missed cystic tumor of the pancreas and not an acute pancreatitis caused by biliary lithiasis or abuse of alcohol. This corrected interpretation of the anamnestic data led us to perform diagnostic studies, show an IPMN and perform a resolutive pancreatoduodenectomy.

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