A Patient Case of Pancreatic Hydatid Cyst

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Abstract

The primary location of pancreatic hydatid cyst is exceptional even in countries with high endemic. Through a primary hydatid cyst of the pancreas observation in a girl of 8 years and a literature review, we discuss the diagnostic difficulties and methods of surgical treatment of this rare localization of hydatid cyst.

Keywords: Primary Hydatid Cyst of Pancreas; Child; Rare; Diagnosis Difficult; Surgical Treatment

Introduction

Hydatidosis is a disease which is rife in the state endemic in several countries of the Mediterranean basin and in South America. Despite the contribution of medical imaging, the diagnosis of pancreatic localization stays exceptional. The hepatic and pulmonary locations are most frequent [1]. The confirmation of hydatid origin of the pancreatic cyst is difficult sometimes, confusing with other cystic lesions of the pancreas. Through a primary hydatid cyst of the pancreas observation concerning an 8 years old girl, we will clarify the diagnosis difficulties and peculiarities of surgical treatment of this pathology.

Observation

An 8 years old girl, no particular history, presented from 4 months an epigastric pain associated with vomiting. The clinical examination found a mass straddling the right upper quadrant and epigastrium measuring 10 centimeters in major axis, adherent in the deep level. The patient received an upper GI peptic transit with gastrografine ingestion which showed a widening of the duodenal framework (Figure 1). An abdominal CT scan, done secondarily, objectified the presence of cystic formation, measuring 72 mm, at the expense of the head of the pancreas, with purely fluid content and introducing a hydatid cyst of the head of pancreas type II of the Gómez classification (Figure 2). Furthermore, this review showed no other cystic lesions in the liver, the spleen or the peritoneum. Lung x-ray showed no other pulmonary localization. The biological assessment was unremarkable and hydatid serology was negative.

A sus-umbilical median laparotomy was performed. The exploration found a hydatid cyst of the head of the pancreas about 8 cm in diameter, compressing 2nd duodenum (Figure 3). After protection of the surgical field with fields soaked in hydrogen peroxide, a puncture-aspiration of liquid light ‘water of rock’ followed by a longitudinal kystotomy were realized with extraction of the proligere membrane of the Cyst (Figure 4). The careful exploration of the residual cavity revealed a small cysto-ductal fistula requiring the making of a cysto-Gastrostomy by retro-gastric way (Figure 5). The operating suites were simple and the patient was released from the hospital at day 6.

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Discussion

Hydatidosis is secondary to the development of the larval form of Echinococcus granulosus [2]. Pancreatic location represents less than 1% of hydatid cysts and 0.2% of the abdominal locations [3,4]. It is isolated in 91% of cases with a slight predilection for the cephalic portion in 57% of cases [3,5]. Our patient presented a cephalic localization. The infestation of the pancreas is done through blood after hepatic and pulmonary filters [2,6]. The size of the cysts is variable ranging from a few millimetres to 20 cm [7]. In children, this location remains outstanding [5,8]. Hydatid cyst of the pancreas (HCP) has no specific clinical signs. The symptomatology is function of the seat and the size of the cyst [2,5,9]. Indeed, the HCP can be revealed by a chronic epigastric pain, obstructive jaundice in cases of cephalic localization or an epigastric mass [5,10]. Complications can be revealing and the most frequently found are: suppuration of the cyst [11,12], breaking intraperitoneal or retro-peritoneal, with as a consequence, a hemorrhage or a peritoneal reaction [7,11], a cyst in the common bile duct fistulisation [5,13], an opening of the cyst into the duodenum [5,11,14], segmental portal hypertension by compression of the splenic vein [15], obstructive chronic pancreatitis [16,17], acute pancreatitis or a wirsungorrhagy [16]. Pain and vomiting were revealing symptoms in our patient.

Imaging (ultrasound, CT and MRI) makes the diagnosis of the cyst but it is difficult to relate the lesion to the hydatid disease. Some signs may, however, help to evoke the diagnosis including peri-cystic calcifications, the presence of intra-cystic vesicles, a detachment of the hydatid membrane or other more obvious location of hydatid cyst [13,18] association. In case of persistence of a diagnostic doubt, the use of the endoscopic is a great thing because it allows a better study of cystic content [19]. The epidemiological context and hydatid serology are there all their interest. However, the negativity of serology should not do eliminate the hydatid nature of a cystic lesion of the pancreas. Abdominal CT has allowed the diagnosis of hydatid cyst in our patient. The differential diagnosis arises with other macrocystic tumors of the pancreas: the...
pancreatic cystadenoma, the cystadenocarcinoma and childhood congenital cystic dilatation of the common bile duct type Ib of Todani classification. The treatment is surgical [20]. The attitude is different and depends on the seat of the cyst and the existence or not of a cysto-ductal fistula [5,9]. The left spleno-pancreatectomy is the procedure of reference for the corporeo-caudal locations because of the morbidity of drainage after resection of the dome protruding [21]. About cephalic cysts, the benchmark treatment is resection of the protruding dome in case of ductal fistula, associated cysto-digestive anastomosis [22]. This derivation type could be cysto-gastric or cysto-duodenal or cysto-jejunal anastomosis. They must be preferred to the external drainage or the single resection of the protruding dome with or without epiploplasty because of the morbidity resulting [9,23]. This gesture could be difficult and dangerous if the pancreatic parenchyma is friable. In this case, a ductal stent on a guardian drain could be considered. Adjuvant medical treatment by Albendazole is indicated in the event of multiple Hydatid disease or per-operative ruptured cyst.

The exploration of the cystic cavity in our patient allowed finding a cysto-ductal fistula, which prompted us to associate cysto-gastric anastomosis in the resection of the protruding dome.

Conclusion

A great rarity ailment, the primitive hydatid cyst of the pancreas is difficult to diagnose if you don’t evoke it in pre-op. Epidemiological, clinical, biological and radiological must be taken into account. Differential diagnoses are disparate and treatment is of course very different depending on the etiology of pancreatic cystic image.

Contributions of the Authors

All authors have contributed to the editing of this manuscript and read and approved the final version.

References