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Pancreatic Metastasis of Medullary Carcinoma of the Thyroid

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Abstract: Medullary carcinoma of the thyroid (MCT) is rare. Lymphophilic dissemination is frequent and early and metastatic progression is often multiple localizations. MCT metastasis is exceptionally in the pancreas. We report the case of a 63-year-old patient, who had lymphnode dissection thyroidectomy 10 years ago, admitted for epigastralgia without jaundice or gastrointestinal hemorrhage. Abdominal CT showed a mass of the pancreas head without secondary lesion. A cephalic duodeno pancreatectomy was performed and 3 years later, the patient is in good general condition and free from any tumor recurrence. Pancreatic metastases of medullary thyroid carcinomas are rare most commonly found on imaging. The treatment is surgical, the prognosis is better than in case of primary tumor.
Key words: metastasis, pancreas, carcinoma, thyroid.

INTRODUCTION

Medullary thyroid carcinoma (MTC) is a rare cancer of the thyroid C-cells. It represents between 5 and 10% of thyroid cancers. The lymphophilic diffusion of CMT is frequent and early onset and the metastatic progression is often of multiple localizations, with preferential liver injury followed by the lungs and the bone. The CMT metastasis exceptionally to the pancreas. We report an unusual case of pancreatic metastasis secondary to a CMT manifesting after 10 years of evolution of the primary tumor.

CASE REPORT

A 63-year-old woman with a history of hypertension and diabetes undergoing treatment, thyroidectomy + lymphnode dissection (no anapathic evidence) 10 years ago and adnexectomy 6 years ago. She consults for epigastralgia and vomiting without jaundice evolving for 2 months in the context of conservation of the general state.

Lab test have shown

Hb: 9,5 g/dl, WBC : 7950/ul, blood platelet: 355000/ul, TP : 100%. Total bilirubin: 3 mg/l, conjugated bilirubin: 1 mg/l, unconjugated bilirubin: 2 mg/l. ASAT : 8 UI/l, ALAT : 6 UI/l, PAL : 58 UI/l, GGT : 14 UI/l , Ca19-9 : 89 UI/l, ACE : 6,64 ng/ml

The thoraco-abdominopelvic CT showed a mass of pancreatic head about 6 cm in diameter with a necrotic center without dilatation of the bile ducts and Wirsung without secondary lesion at a distance (image 1). Operated patient, the exploration found a tumor of the head of the pancreas without peritoneal carcinosis or hepatic metastasis or vascular invasion, a duodenopancreatectomy with cephalic fitting according to Child was made (Image 2); the evolution was simple with discharge of the patient one week later

The histopathological examination and the immunohistochemical complement show that it is a pancreatic localization of a weakly differentiated carcinomatous process for which the profile favors a metastasis of a medullary carcinoma of the thyroid, with tumor cells express chromogranin A, synaptophysin and CD56 and focus calcitonin.

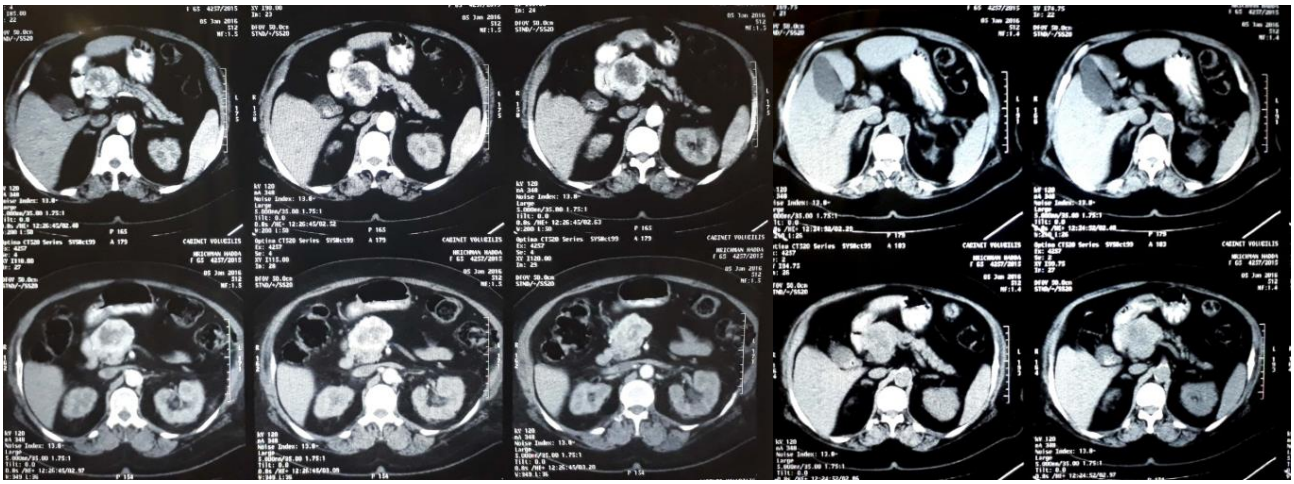

Image-1: CT image showing a mass of the necrotic head of the pancreas without dilation of the bile ducts and Wirsung

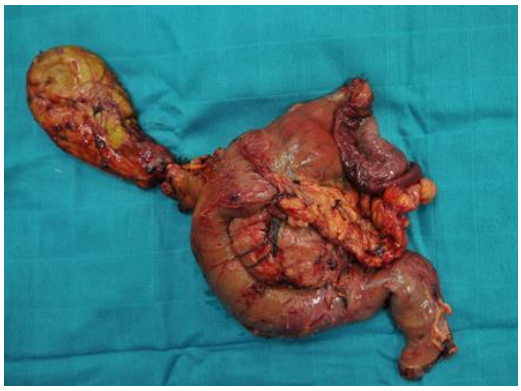

Image-2: Image of cephalic duodeno pancreatectomy

DISCUSSION

Isolated pancreatic metastases (PD) are very rare. Only 3% of patients with multiple metastases have pancreatic metastases and metastatic cancers account for only 2% of pancreatic tumors [1]. Common malignant tumors that metastasize in the pancreas include renalcell carcinoma, lung, medullary thyroid carcinoma, lymphoma, alveolar rhabdomyo sarcoma, and the esophagus [2]. Most patients with PD exhibit and radiographic signs similar to those of primary pancreatic tumors. The preoperative diagnosis rate could reach 30%. The exact pathogenesis is not well-known; however, the hematogenous pathway is well tolerated. This usually takes a long time for 36 to 90 months when primitive tumors spread to the pancreas. Metastases maybe single or diffuse lesions, Minni concluded that 64.7% of lesions were single nodules and 19.1% were multiple nodules, while 16.2% were diffuse lesions [3-5].

In an autopsy study in Japan, 15% of patients who died of cancer had pancreatic secondary locations [6]. Medullary thyroid carcinoma (MTC) constitutes 5 to 10% of all thyroid carcinomas [7] and is the third type of thyroid cancer after papillary and follicular carcinomas [8]. It is derived from parafollicular C-cells and differs in these respect follicular cells. TCM is more aggressive and more difficult to treat [10]. These contrasts with papillary and follicular carcinomas, which respond to radioactive iodine and may therefore, have a favorable clinical course, even in cases of recurrence or metastasis [11]. Regional lymphnodes are the most common sites of metastasis for TCM. They are present in 50% of cases at the time of discovery [7, 9]. When distant metastases occur, the organs most commonly affected are the liver, lungs, bones and mediastinum [8, 9]. Pancreatic metastasis occurs in about 2% of cases [2].

Thus, a pancreatic tumor discovered long after the healing of an extrapancreatic primary tumor poses a problem of diagnosis. Clinical signs differ little from those of primarypancreatic tumors: isolated abdominal pain, weight loss, painful jaundice, or even gastrointestinal bleeding favored by duodenal invasion. Some reports of acute pancreatitis revealing [12], abdominal swelling, duodenal perforation, malabsorption [13] and exocrine pancreatic insufficiency with steatorrhea [14] have been reported.

In ultrasound, the lesion appears hypo echoic, or exceptionally cystic in appearance [15, 13]. The abdominal CT may show an isodense lesion revealed by an isolated deformation of the contours of the pancreas

or, more usually, a hypodense lesion, rounded, with regular contours, well limited, with hetero generous enhancement in three quarters of cases [17, 20].Cystic or hypervascularized aspects simulating angioma or micro-cysticadenoma (kidneytumor, hepatocarcinoma) have been described[13].

The recent series of Klein [17]. showed the frequency of multiple lesions (16.7%), the absence of preferential localization within the pancreatic gland, the rarity of vascular invasion in contrast to primary adenocarcinomas and the frequent occurrence of other concomitant, hepatic, ganglionic and adrenal metastases. For some authors, endoscopic retrograde echolangiopancreatographyis of no interest in differentiating between primary and secondary tumors [18]. For others [19], multiple short and asymmetrical stenoses of the Wirsung canal and secondary ducts would lead to metastasis. On the other hand, the echoendoscopic appearance is quite characteristic and differs from that of primary adenocarcinomas, this difference being suggestive [16]: rounded, circumscribed, homogeneous, hypo- or isoechoic lesion with respect to the adjacent pancreas, with posterior reinforcement of the ultrasound beam.

The radiological aspects are varied: pancreatic metastases are most often hypodense on tomodensitometry and hypoechoic on ultrasound endoscopy [22, 16]. PET-scan has an interest in the detection of metastases not detected by conventional imaging, especially during an unexplained elevation of calcitonin [23].

The best treatment for these metastases is surgical excision [24, 25] when possible. Pancreatic resection is most often major, the type of which depends on the topography of the lesion (15). Cephalic duodenopancreatectomy or splénopancréatectomie is most often required. The multiple and diffuse nature of pancreatic secondary lesion scan lead to total pancreatectomy. Some authors opt for tumor-limited pancreatic resection by performing atypical pancreatectomies to preserve the maximum healthy parenchyma under the guise of an extemporaneous examination of the sectional slices [28]. This attitude does not prevent the occurrence of pancreatic fistula and does not seem to modify either the frequency of recurrence or the survival of patients (15).

Survival is better than patients with primary pancreatic adenocarcinoma considered resectable[25]. According to a report by Hirota *et al*. Moderate life span does not exceed 8.7 months in patients with pancreatic metastases [26]. However, when the metastatic pancreatic nodule is the only metastatic carcinoma, resection of the nodule increases the five-year survival rate to 31% [27].

Les facteurs de bon pronostic de ces métastases pancréatiques semblent être l'apparition tardive d'une localisation pancréatique, une forme asymptomatique, une lésion pancréatique unique ou un aspect radiologique de nécrose centrale de la lésion tumorale [15].

CONCLUSION

In conclusion, pancreatic metastases are rare tumors to be evoked before a pancreatic tumor syndrome in a patient with a history even distant of primary tumor considered in remission. Diagnosis, supported by CT and endoscopic ultra-sonography, is based on the anatomopathological data of the pancreatic lesion, confronted, where possible, with those of the primary lesion.

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