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Bilateral Ovarian Krukenberg Tumor:A Typical Case Report

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ABSTRACT

Krukenberg tumors are defined as ovarian metastasis of digestive tract cancer. They represent only 1% to 2% of all malignant ovarian tumors [1]. Stomach is the most common primary site. We report an observation of Krukenberg tumor arising from a gastric cancer, discovered during the exploration of chronic abdominal pain in a 48-year-old women. The call signs were mainly digestive. Ultrasonography and pelvic MRI played a key diagnostic role. The aim of our article was to give an overview of the imaging features of typical Krukenberg tumor.

Introduction

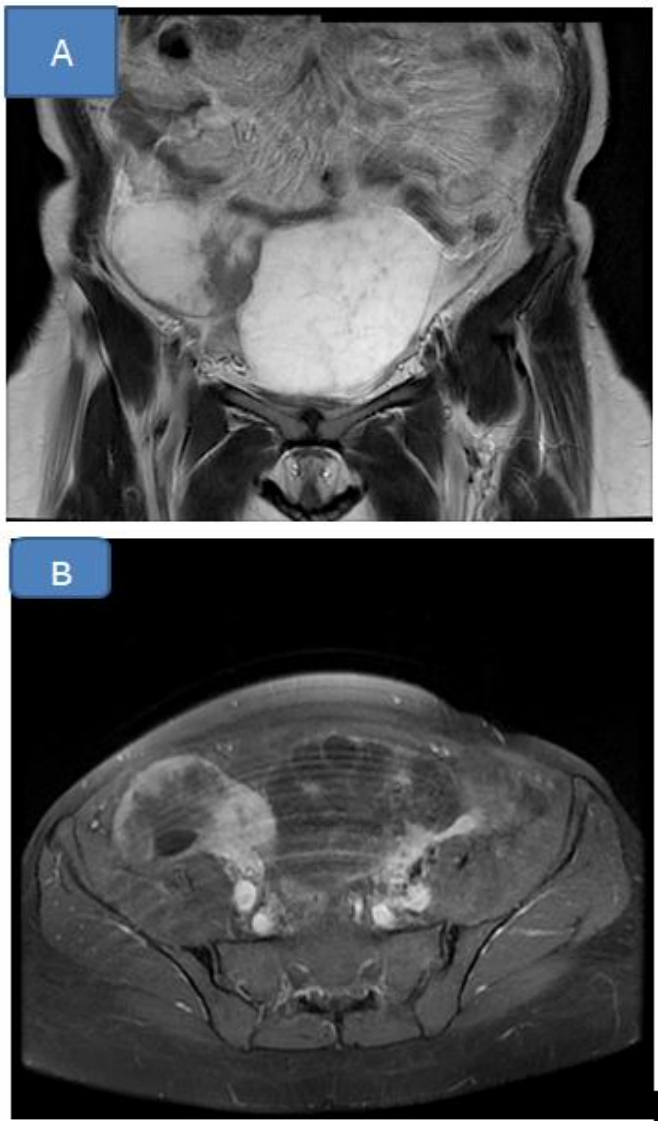
Krukenberg tumors (TK) are defined as ovarian metastasis. The most commonly noticed primary site of krukenberg tumors is gastric cancer. However, primitive forms have been described. Histopathologically, they appear as carcinomas that have a significant component of mucin-producing signet-ring-cells. The lack of specificity of the call signs explains the fact that they are usually diagnosed at a late stage. Imaging plays an important role in identification of ovarian krukenberg tumors. We report a case of KT discovered during an exploration of a chronic abdominal pain.

Case report

It is about a 48-year-old woman who did not have a family history of malignancy and no significant past history, presented with dull aching abdominal pain. It was associated with profound anorexia that had progressed for over a year. The patient complained of a significant abdominal distension which progressed gradually with accentuation of the abdominal pain which became excruciating and onset of pelvic pain. On clinical examination, the patient was in poor general condition with epigastric tenderness and palpable pelvic masses.

Abdomino-pelvic ultrasound was performed, which revealed a bilateral pelvic multiloculatd cystic mass with evidence of solid components and septations. The uterus was normal with a normal endometrial thickness.

Magnetic resonance imaging (MRI) findings were consistant with bilateral multiloculated cystic ovarian masses with bosselated contour: T1 hypointense, T2 hyperintense containing endoluminal deposits T2 hypointense, diffusion restriction and strong enhancement postcontrast. With these masses was associated a moderate volume ascites. Furthermore, there was a circumferential and irregular antro-pyloric wall thickening (Figure 1).



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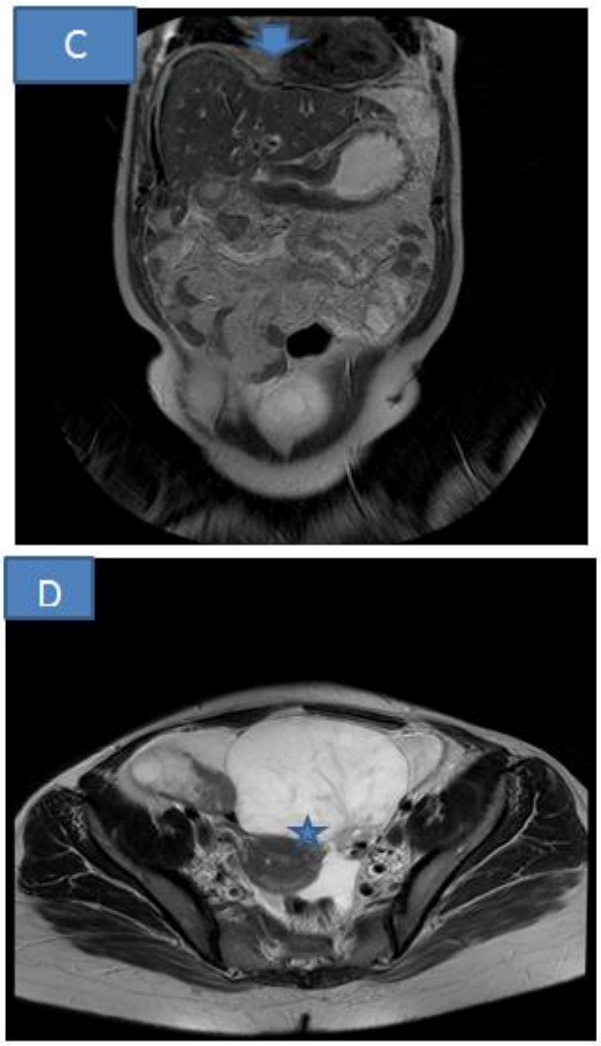

Figure 1. Abdomino-pelvic MRI in T2-weighted sequence in coronal (A, C), axial (D) sections and in post-Gadolinium T1-weighted sequence (B): Bilateral ovarian masses T1 hypointense T2 hypersignal with solid components T1 and T2 hypointense, strongly enhanced after injection of contrast agent associated with antropyloric wall thickening (C) and pelvic effusion (D)

Discussion

Krukenberg's tumor is a rare tumor representing 1 to 2% of all ovarian tumors. Nearly 80% of Krukenberg tumors are bilateral and almost always of metastatic origin. In fact, the primary carcinoma may remain undetected [2].

The primary lesion of Krukenberg tumor often originates in the stomach but can also originate in the colon, bile ducts, appendix, breast, or gallbladder. The primary tumor cannot be found in at least 10% of cases [3]. In many cases, the primary tumor is very small and can go unnoticed. Clinically, patients present with abdominal or pelvic pain and menstrual irregularities. Some patients may present with non-specific gastrointestinal symptoms or may remain asymptomatic.

The diagnosis of Krukenberg tumor is histological and largely depends on the discovery of a mucin-secreting signet ring cell carcinoma in the dense fibroblastic stroma of the ovary [4]

Krukenberg tumors may show distinct results on MRI, including:

Bilateral complex pelvic masses with solid components T1 and T2 hypointense (dense stromal reaction) and they show corresponding diffusion restriction and an internal hypersignal (mucin) on the T2-weighted sequences [5].

A significant enhancement of the wall, of the solid component or of the wall nodule is overall [6].

In ovarian masses, hypointense T2 solid components are characteristic of Krukenberg tumors.

Krukenberg tumors originating in gastric cancer appear more solid and are smaller compared with metastatic ovarian masses from colon cancer. [7]

However, not all ovarian metastasis are krukenberg tumors. Differential diagnosis include primary ovarian epithelial neoplasm and non-Krukenberg metastasis which does not include signet ring cell features on histopathologic findings.

Due to their aggressiveness, Krukenberg tumors are associated with poor prognosis. The optimal treatment has not yet been established. Chemotherapy associated with metastasectomy of krukenberg tumors is one of the main therapeutic modalities for gastric cancer with ovarian metastasis that may positively influence the prognosis. [8]

Conclusion

Krukenberg tumor is an uncommun secondary ovarian tumor that should be suspected when bilateral mixed solid and cystic ovarian masses are seen and this should lead to look for a gastro-intestinal primary malignancy if it is not already known.

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