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Case Report

A Malignant Tumor of the Inferior Vena Cava: About a Case at the Niananankoro Fomba Hospital in Ségou

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Abstract

Malignant tumors of the inferior vena cava (IVC) are very rare. Leiomyosarcoma accounts for 95% of cases. Cross-sectional imaging including computed tomography and magnetic resonance imaging (MRI) is a cornerstone in the orientation diagnosis and assessment of tumor extension. The confirmation is histological. We present the case of an 8-year-old child referred by pediatric surgery for suspected bladder tumor diagnosed on CT scan.

Keywords: Tumour, inferior vena cava, Hospital, Niananankoro Fomba.

INTRODUCTION

Malignant tumors of the inferior vena cava (IVC) are very rare, however, they occupy an important place in tumors with a vascular origin. Several pathological entities have been described in the literature, leiomyosarcoma representing 95% of cases [1, 2]. Cross-sectional imaging including computed tomography and magnetic resonance imaging (MRI) are two essential elements of the orientation diagnosis and assessment of tumor extension. It is only placed in 10% of cases [1, 2]. We present the case of an 8-year-old child referred by pediatric surgery for suspected bladder tumor diagnosed on CT scan.

OBSERVATION

It was an 8-year-old boy who presented for about 4 months recurrent abdominal pain and a progressive increase in abdominal volume. The clinical examination found a hard abdominopelvic mass. Biological explorations revealed anemia at 08 g/dl, hypercreatinineemia. An abdomino-pelvic CT scan, without and with injection of contrast product (PDC) was performed. It showed a right lateralized retroperitoneal necrotic tissue process measuring 128 x 115 x 98 mm, circumscribing the IVC in a cuff. It extends from the iliac bifurcation to the inferior vena cava (IVC), below the renal arteries. It is heterogeneously enhanced after the injection of the contrast product. Faced with this result, the indication for surgical treatment was raised, but the patient was evacuated to an onco-pediatric center.

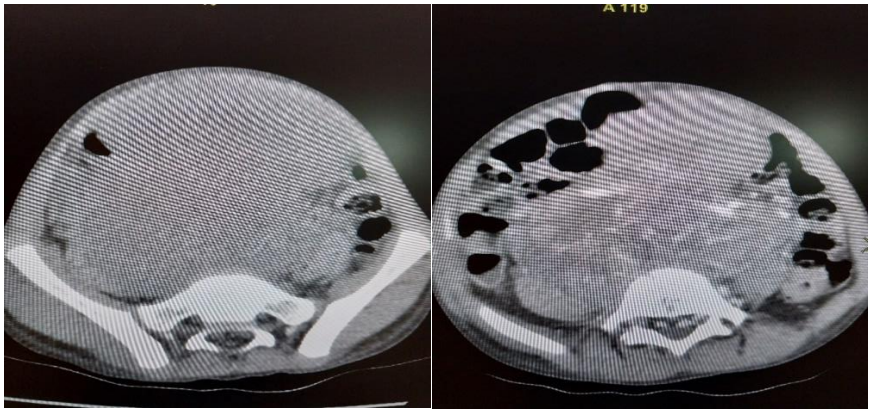

Figure 1: Axial sections without and with injection of the contrast product of the abdomen showing a large heterogeneously enhanced tissue mass

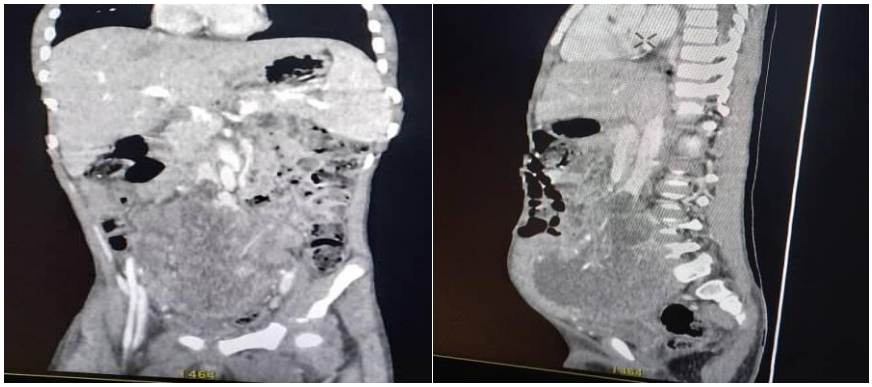

Figure 2: coronal and sagittal slices in the portal phase revealing a voluminous heterogeneously enhanced tissue mass connecting in a sleeve with the IVC

DISCUSSION

IVC tumors are very rare. They represent 0.07% of cases in an autopsy series. They are dominated by leiomyosarcoma, which accounts for 95% of primary IVC tumors. The remaining 5% are represented by: fibrosarcoma and cystic (lymphangioma) or solid (embryonic and lymph node remnants) formations [1]. The division of the IVC into 3 segments makes it possible to classify the lesions in strictly infrarenal segment I; segment II comprising the origin of the renal veins and the retro-hepatic segment of the IVC; finally segment III comprising the origin of the supra-hepatic veins and the supra-hepatic segment of the IVC up to the right atrium [3]. The most frequent localization concerns segment II which is different from our observation where it concerns segment I.

The age of onset is variable, the extremes recorded being 03 years for the youngest patient, and 83 for the oldest, the average being around 58 years. The distribution being homogeneous, no specific age group appears in view of the reported cases. However, it should be noted that no cases have been reported in children [4].

Symptoms depend mainly on the segment of the IVC involved and vary depending on the size and growth of the tumor. Patients with damage to the upper part of the IVC (from the hepatic veins to the right atrium), often present with nausea, weight loss, Budd-Chiari syndrome and lower extremity edema. Patients with mid-segment (renal vein to hepatic vein) involvement often experience epigastric and right upper quadrant pain. Kidney damage can occur, leading to renal vein thrombosis, nephrotic syndrome or, more rarely, hypertension. In the case of tumors of the lower segment (subrenal part), patients often present with pain in the lower quadrant, pain in the back or flank and edema of the lower limbs [5].

CT after injection of contrast product makes it possible to specify the nature of the mass, often polylobed contours, presenting heterogeneous enhancement after injection of contrast product. It determines the location, the relationship with neighboring organs, the degree of obstruction of the IVC and the neighboring veins. It also allows the search for metastases, particularly hepatic and pulmonary [6]. MRI is as precise as possible of the vascular origin, the relationship with neighboring organs and the permeability of the IVC. The confirmation of the diagnosis is histological. The biopsy can be performed percutaneously under computed tomography guidance, or via the endovenous route [1].

These tumors are treated, when possible, with radical en bloc resection surgery, with the aim of obtaining clear margins, unless the patient has metastasis or extensive local invasion or is unable to tolerate surgery. . IVC leiomyosarcoma may require a combination of radiation therapy and chemotherapy before removal to reduce tumor size and increase resection rate. If, however, complete resection of the tumor is not possible, tumor reduction followed by radiation therapy is a good palliative treatment option and follow-up of the disease in a palliative setting [7].

CONCLUSION

IVC tumors are very rare. Imaging plays a key role in establishing the diagnosis. These tumors have a typical radiological appearance which can be summarized as follows, summarized as follows: dilation of the lumen of the IVC; an enhanced heterogeneous intra- or extraluminal mass, often necrotic; and the development of extensive collateral circulation around the lesion due to its slow growth. Surgical resection represents the patient's only chance of long-term survival. This observation shows the existence of this tumor in children, which was always considered as an adult tumor.

Conflict of Interest: None.

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