

CASE REPORT

A Giant Retroperitoneal Hemangiosarcoma in a Young Boy: CT Findings

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Abstract

Retroperitoneal hemangiosarcoma (RH) is an uncommon neoplasm that derives from the vascular endothelium; due to its biological behavior, it should be distinguished from other retroperitoneal tumors. We report a case of a 40-year-old man with diag-

nosis of retroperitoneal mass, that was suspected to be malignant. The specimen was histopathologically proved to be a hemangiosarcoma. The patient was suffering from left upper quadrants prolonged abdominal pain, and had made a contrast-enhanced abdominal Computed Tomography (CT) that had shown the voluminous abdominal mass.

Key Words: *Hemangiosarcoma; Retroperitoneal; Mass; Computed Tomography; Abdominal Pain*

Case Presentation

A 40-year-old man presented at emergency department with a history of prolonged abdominal pain at the left upper quadrants, with a significant weight loss (about five kgs in the last ten months), and fever (37.0 °C). The naso-pharyngeal sampling was negative for SARS-CoV-2. On a physical examination, there was abdominal pain in the epigastrium and in the other left abdominal quadrants, with a palpable pathological mass in the left flank region. Laboratory exams revealed anemia (9.0 g/dl), leukocytosis ($10.8 \times 10^9/l$); iron deficiency (16 µg/dl); and increased values of C-reactive protein. Therefore, a contrast-enhanced abdominal CT was urgently ordered and made, also extended to the evaluation of the chest. CT exam was performed with 64-slic-

es MS scan (G.E. Optima), basal and contrast-enhanced phases, and evaluated on the monitor with Multiplanar reconstructions (MPR). CT had shown the presence of a giant, heterogeneous, mass (8x5 cm in diameter), occupying retroperitoneal space at the level of a plane passing between the left posterior adrenal region up to and below the gastric region. The mass had a polylobed morphology, and presented an its vascular internal network (in the arterial phase), with its typical impregnation. There were also some small adenopathies in the adjacent abdominal spaces on the left, and minimal compressive signs on the contiguous intestinal loops. There were no additional metastatic disseminations at the abdominal organs and at a distance, and no vascular infiltrations of the adjacent vessels (Figure 1).

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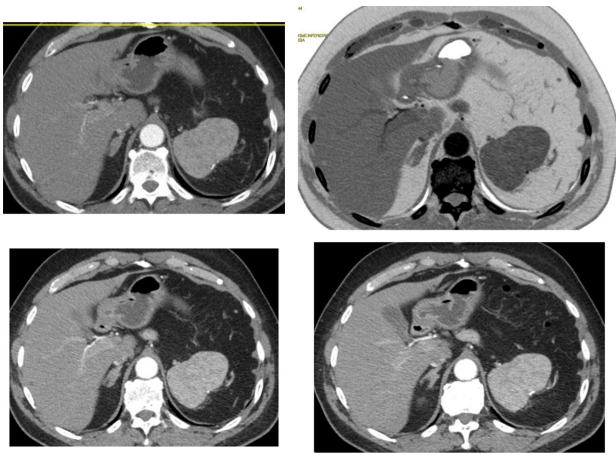


Figure 1 (a-d) Contrast-enhanced Computed Tomography of the abdomen had shown the presence of the giant, voluminous, mass, vascularized, in the left abdominal quadrants, that is related to the nature of retroperitoneal hemangiosarcoma. Axial CT reconstructions and angiographic-like vision.

The patient was referred for surgical valuation, while a histopathology of the tissues taken by biopsy of the mass, carried out after the CT scan, showed that it was a retroperitoneal hemangiosarcoma (RH). So, the patient will be soon operated to remove the mass, and we'll also follow him in the future in the follow-up controls, by CT imaging.

Discussion

Hemangiosarcoma's are an extremely rare group of malignant tumors, representing about 1% of all solid tumors in adults, with a high mortality. Generally, the disease is predominant in males, is seen between the fourth and ninth decades, and presents with abdominal pain, palpable mass and weight loss. Radiologically, it is a heterogeneous mass whose size is at least 5 cm [1-3]. Primary retroperitoneal masses include a diverse, and often rare, group of neoplastic and non-neoplastic entities that arise within the retroperitoneum but do not originate from any retroperitoneal organ. Their overlapping appearances on cross-sectional imaging may pose a diagnostic challenge to the radiologist; familiarity with characteristic imaging features, together with relevant clinical information, helps to narrow the differential diagnosis [4]. Contrast-enhanced abdominal Com-

puted Tomography can well evaluate: the normal anatomy of the retroperitoneum, with an emphasis on fascial planes, retroperitoneal compartments, and their contents using cross-sectional reconstructions; specific radiologic signs to accurately identify an intra-abdominal mass as primary retroperitoneal and its location. CT also allows a differential diagnosis based on a predominantly solid or cystic appearance, including neoplastic and non-neoplastic entities. In the absence of positive tumour markers or an evocative biology, percutaneous biopsy is necessary [5].

Conclusion

In front of a primary retroperitoneal tumour, it is necessary to have in mind all possible diagnoses in order to specify the diagnostic strategy and the treatment. CT plays an important role in the diagnosis and evaluation of the retroperitoneal hemangiosarcoma, allowing an adequate diagnosis as early as possible, an appropriate surgical timing, follow-up and checks over time for the patients.

Conflicts of Interest

The authors certify that there is no conflict of interest with any financial organization regarding the material discussed in the manuscript.

Patient Consent Statement

The patient confirmed the consense for publication of our case report.

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