RETROPERITONEAL ARTERIOVENOUS MALFORMATION-HEMANGIOMA: A CASE REPORT

MIHAELA RACHERIU[1]

[1] *"Lucian Blaga" University of Sibiu*

Keywords: *retroperitoneal, arteriovenous malformation, Computed Tomography*

Abstract: *Retroperitoneal hemangiomas represent a very rare pathology. This paper presents the case of a 23-year-old male patient examined through emergency service for polytrauma. Whole body CT scan was performed and abdominal dynamic contrast-enhanced computed tomography and was found a retroperitoneal tumour (anything else was without any modifications) which was interpreted as vascular malformation probable retroperitoneal hemangioma, the patient refusing surgical intervention.*

INTRODUCTION

Vascular tumours are non-epithelial tumours, more common in childhood.(1)

Primary retroperitoneal tumours of vascular origin are a diverse group of rare abdominal neoplasms, both benign and malignant.(2)

The most frequent malignant tumours are liposarcoma and leiomyosarcoma, while the most often found benign tumours are lipoma, leiomyoma and cavernous hemangioma.(2,3)

Hemangiomas are a group of neoplasms originating from vascular tissue where benign tumours prevail (2), that can be found in any solid or hollow viscera, most frequent position being the liver. However, unusual imaging features and atypical locations can present significant diagnostic dilemmas.

The literature is replete with case reports of unusual and atypical hemangiomas that resulted in surgical excision, with the diagnosis established only at histopathology.(4)

Anastomosing hemangioma represents a particular type of hemangioma found the most frequent in kidney and only rare in other abdominal organs, in literature being reported only one case of para-aortic region anastomosing hemangioma.(5)

CASE PRESENTATION

This case is of a 23 year-old otherwise healthy male presented after an accident with polytrauma in emergency department and was investigated with whole body-CT scan (GE Optima 660, 64/128); the examination revealed a low density cyst-like mass (15 UH) left para-aortic, infrarenal, 4,7/ 4,5/ 4,5 cm diameter, very well-circumscribed, without intraperitoneal or adjacent fluid collection, without infiltration of retroperitoneal organs or structures (figure no. 1).

Thus, a contrast-enhanced dynamic abdominal CT scan was recommended for detailed analysis of the lesion which after iv contrast showed peripheral nodular enhancement and progressive centripetal filling of the mass (figure no. 2, figure no. 3).

There was no evidence of feeding arteries from the surrounding organs. The patient refused surgical intervention, although one of the major complications is bleeding.

Figure no. 1. Computed tomography scans with a cyst-like well encapsulated mass, the paraaortic tumour being a incidental finding. In this native section there is a hipodens cyst-like mass (15 UH), left para-aortic, infrarenal, 4,7/ 4,5/ 4,5 cm diameter, very well-circumscribed, without phlebolits included, without intraperitoneal or adiacent fluid collection, without infiltration of retroperitoneal organs or structures

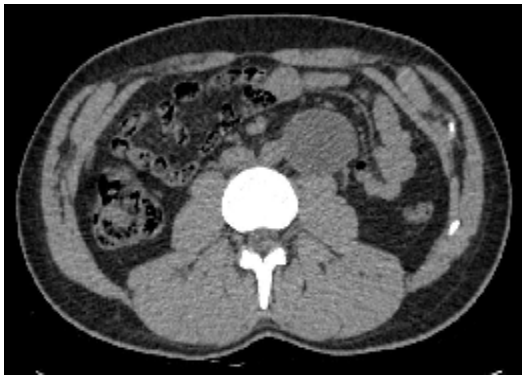
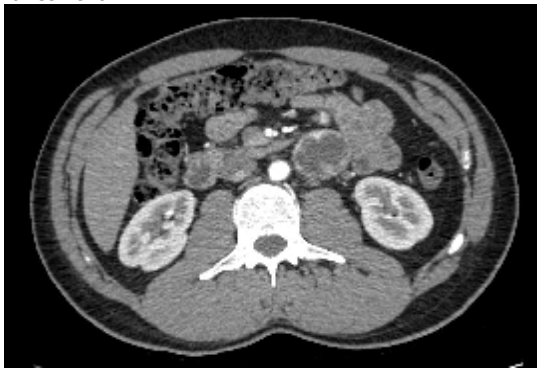


Figure no. 2. Computed tomography scans in arterial phase with a well encapsulated mass with periferic nodular enhancement



[1]Corresponding author: Mihaela Racheriu, Str. Prof Dr. I. Moga 1A/124, Sibiu, România, E-mail: marinmihaela2400@yahoo.com Phone: +40723 833898

Article received on 10.10.2017 and accepted for publication on 29.11.2017
ACTA MEDICA TRANSILVANICA December 2017;22(4):34-35

Figure no. 3. Another section in venous phase with periferic and progressive uptake of contrast

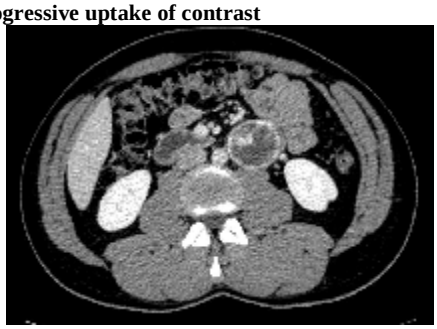
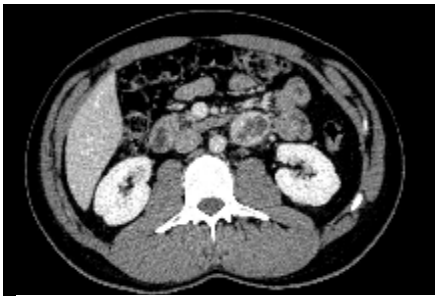


Figure no. 4. Section in venous phase with periferic and progressive fill-up of the tumour- hemangioma-like, no infiltration of adiacent organs, and no fluid accumulation being observed.



Computed tomography scans native, with intravenous contrast in arterial, venous and delayed phase in which a cyst-like well encapsulated mass on native examination appears with centripet nodular enhancement of the wall and centripetal filling after contrast injection in contact with the aortic wall and left psoas muscle.

DISCUSSIONS

Tumours with origin in retroperitoneum are rare, representing 0,07 %- 0,6% of all tumours conform studies(3), the most of them being liposarcomas, so malignant tumours.

Vascular lesions are composed of two major types of abnormalities: hemangioma and vascular malformation (1), both uncommon in retroperitoneal organs. All authors agree that among the reported cases of retroperitoneal hemangiomas cavernous is the most common. Some authors consider that the atypical findings on the CT scan might be attributable to neovascularity, arteriovenous shunting, thrombosis, and hemorrhage, which slowed blood flow and therefore delayed the contrast material from filling the tumor.(1) Our first impression was of a cystic tumor with retroperitoneal origin, in which case one should exclude diagnostics as liposarcoma, leiomyosarcoma, hemangiopericytoma and angiosarcoma, and the second possibility was of aortic posttraumatic aneurism.

Usually primary retroperitoneal tumors are diagnosed late, when the disease is advanced. This is caused by its initially symptomless course or with nonspecific and vague symptoms and therefore delayed presentation to a physician, which usually delays imagistic investigations, symptoms being only abdominal distension, diffuse, non-specific abdominal pain. In the literature reports we found only 15 cases of retroperitoneal cavernous hemangiomas in kidneys, adrenal glands, urinary bladder, uterus and the retroperitoneal part of the rectum.(1) From other reports the most common type of hemangioma found and diagnosed in retroperitoneal space is the cavernous type, usually hypodense mass with very small enhancement (1), being initially confused with a cystic tumour (also our case) some of them with calcified ring.(2)

Hemangiomas have an randomly evolution from rapidly growth, to growth and completely regress.(2)

As a first step in diagnosis we excluded from differential diagnosis a retroperitoneal neoplasm because those are most prevalent at 40-50 years and most of them are very large tumours, although almost every time they develop outside an organ.

CONCLUSIONS

In this study, we present a case of retroperitoneal cavernous hemangioma, in an adult patient in our hospital, with initial cyst-like or aortic aneurism appearance. The aortic aneurism was excluded after the contrast injection and the appearance of a mass with centripetal progressive filling which is a tumour- like appearance.The clinical features of cavernous hemangioma may be insidious and clinicians need to be alert as such tumors can grow to a very large size and cause serious complications. The differential diagnosis of a retroperitoneum mass must include anastomosing hemangioma (which is a solid non-omogen tumour with a centripetal hepatic hemangioma –like enhancement that grows very slowly), cavernous hemangioma (usually with a very heterogen aspect), paraganglioma (which usually is of greater dimensions than hemangiomas and include calcifications and necrosis zones) , solitary fibrous tumour and sarcoma which resembles the description of paraganglioma, and Castleman's disease which represent a lymph nodes enlargement with typical CT aspect.(5) Although retroperitoneal hemangioma represent a rare condition it cannot be excluded from differential diagnostic when a tumour is found in retroperitoneum, only histological examination being able to conclude a correct diagnosis.(2)

Surgical resection is a curative treatment reducing the risk of hemorrhage and resolving the pressure on neighboring organs. Differential diagnosis may include anastomosing hemangioma because the presence of a slowly progressing, heterogeneous mass in the para-aortic region, which had a CT enhancement pattern resembling a typical hepatic hemangioma.(5)

REFERENCES

1. Hang He, Zunguo Du, Sijie Hao, Lie Yao, Feng Yang, Yang Di, Yongjian Jiang, Chen Jin and Deliang Fu. Adult primary retroperitoneal cavernous hemangioma: a case report, World J Surg Oncol; 2012. p. 10-261, Published online. 2012 Dec , 10.1186/1477-7819-10-261.
2. Zielinski J, Haponiuk I, Jaworski R, Peksa R, Irga N Jaskiewics JJ. Retroperitoneal tumor: giant cavernous hemangioma- case presentation and literature review, - Kardiochir Tora Kochirurgia Pol. 2016 Dec;13(4):375-379, Published online 2016 Dec 30, 105114/ kitp.2016.64889.
3. Godar M, Yuan Q, Shakya R, Xia Zhang YP. Case Report, Mixed Capillary Venous Retroperitoneal Hemangioma,- Case Reports in Radiology, Volume 2013 (2013), Article ID 258352, 3 pages, http://dx.doi.org/10.1155/2013/258352.
4. Tirumani H, Gunabushanam G, Nagar A, Rao Surabhi V, Chintapalli KN, Ryan J. Abdominal Hemangiomas: A Pictorial Review of Unusual, Atypical and Rare Types,- Canadian Association of Radiologists Journal. 2013;64(1):18-27.
5. Jung Min Lee, Hyun Cheol Kim, Dal Mo Yang, Sang Won Kim and Kyu Yeoun Won. Anastomosing Hemangioma Involving the Para-Aortic Region: A Case Report, J Korean Soc Radiol. 2017;76(5):310-313. doi.org 10.3348/jksr.2017.76.5.310.