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Organized hematoma mimicking retroperitoneal cystic tumors

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ABSTRACT

INTRODUCTION: Isolated retroperitoneal cysts are uncommon with an estimated incidence of 1/5750–1/250,000. In women they occur about 1.5–2 times more often than in men. The largest numbers of patients are young or middle aged (20–50 years). Lack of knowledge about the causes of these rare entities and asymptomatic clinical picture often leads to diagnostic and tactical mistakes.
METHODS: The medical history of 54-year old male patient B., who has been hospitalized at Surgical Department №1 of Danylo Halytsky Lviv National Medical University (Surgical Department of Lviv Regional Clinical Hospital), was processed retrospectively.
RESULT: Diagnosing of retroperitoneal organized hematoma in the early stages is not always possible, because exploration of retroperitoneal space can be difficult. General tests and tumor markers are usually normal range and not prognostically informative in this case. Decisively important were imaging diagnostic methods—USG and CT. As clinical cases of organized hematoma are quite rare, finding out retroperitoneal formation with irregular contours and infiltrative component indicates for retroperitoneal tumors. Thus, this formation accumulated contrast that says for increased vascularization. Intraoperative: formation with thick walls and heterogeneous structure. Histological diagnosis: hematoma in a phase of deep organization. On our opinion, taking into account location and structure of tumors, laparoscopic intervention was not appropriate, open surgery was reasonable approach. Preoperative biopsy has a crucial role to set preliminary diagnosis.
CONCLUSION: Despite the fact that organized retroperitoneal hematomas are quite rare, their diagnosis requires detailed examination and histological verification.

1. Introduction

Isolated retroperitoneal cysts are uncommon with an estimated incidence of 1/5750–1/250,000 [2]. In women they occur about 1.5–2 [1,3,4] times more often than in men. The largest number of patients are young or middle aged (20–50 years) [1,3,4]. Lack of knowledge about the causes of these rare formation and asymptomatic clinical picture often leads to diagnostic and tactical mistakes.

2. Methods

The medical history of 54-year old male patient B., who has been hospitalized at Surgical Department №1 of Danylo Halytsky Lviv National Medical University (Surgical Department of Lviv Regional Clinical Hospital), was processed retrospectively.

3. Case report

Patient was admitted in satisfactory condition with complaints of permanent aching pain, feeling of weight in the left hypochondrium and mesogaster, radiating to the back and lower abdomen, bloating, 5% loss weight per year. In the history trauma and surgical inerventions were not mentioned. Patient considered himself sick for 3 years, when he noticed complaints, listed above, for the first time, and found a mass lesion, close to the left hypochondrium, which was increasing in size gradually.

4. Objectively

Patient is in satisfactory condition. Abdomen is bloated, enlarged, painless. Elastic, painless, sedentary tumorlike formation was found in the left hypochondrium. General clinical and biochemical analysis were normal. Cancer biomarkers (CA-19-9, CEA, CA 125) findings were normal. USG and CT revealed pathological cystic formation 153 × 106 × 106 mm with capsule, 2–4 mm thick, containing banners, dividing cystic formation into parts (Image 1). The wall of the cyst accumulates contrast, inner contours are patchy with solid infiltrative component, which is moderately contrasted (Image 2) Visualization of contrasting was improved in CT

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color image converting. The content of the cyst is uniform. Loops of the small intestine, body and tail of the pancreas, as well as left lumbar muscle, mesenteric vessels, left renal vein and aorta are pressed by the formation with no signs of ingrowth. Other pathological changes were not found. During the period of observation (8 months), cyst was punctured three times, 600–800 ml of homogeneous hemorrhagic fluid was removed. After each puncture the cyst restored in size. At microscopic investigation of punctured fluid no tumor cells were found. The patient was assigned to surgical intervention—removal of the retroperitoneal tumor. Intraoperatively: leftwards of spine a large, slow-moving tumor—14–15 cm, situated under mesokolon and extraretroperitoneally. Tumor was separated from surrounding organs and tissues and removed. Histological examination: wall of cystic lesion consists of focally hyalinized fibrosis connective tissue with multifocal accumulations of macrophages, areas of angiomatosis, fine-focal calcifications. The inner surface is covered with amorphous eosinophilic masses that is similar to clotted blood. Paragnosis: retroperitoneal hematoma in the phase of deep organization. The signs of tumor growth were not found. The patient was discharged in satisfactory condition on the eighth day. Control ultrasonography after 6 and 12 months: pathological formation, not been identified (Image 3).

5. Discussion

Today, there are several causes of retroperitoneal organized hematoma, including rupture of aortic aneurysm, traumatic injury of blood vessels, retroperitoneal tumors and coagulopathy [4].

Maurice Barber first described idiopathic retroperitoneal hematoma, known originally as abdominal apoplexy, in 1909 [5,6].

Diagnosing of retroperitoneal organized hematoma in the early stages is not always possible, because exploration of retroperitoneal space can be difficult, especially in patients with obesity or flatulence [1,4]. Clinical signs of organized retroperitoneal hematoma are: abdominal pain, bloating, weight loss. General tests and cancer biomarkers are usually normal range and not

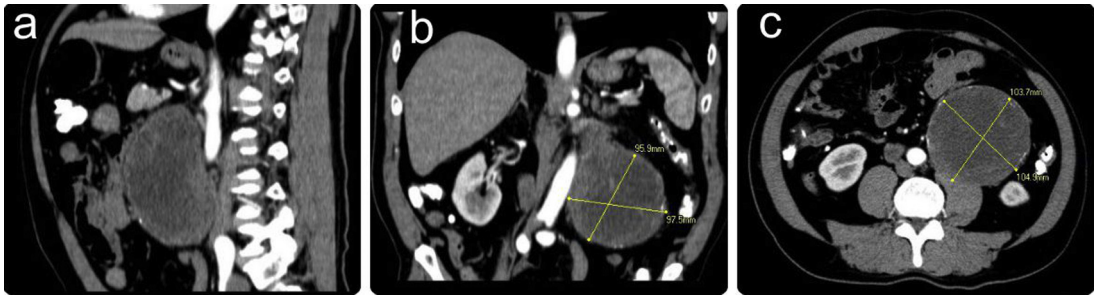

Image 1. CT image (arterial phase): (a) Sagittal (b)Transverse (c) Coronal.

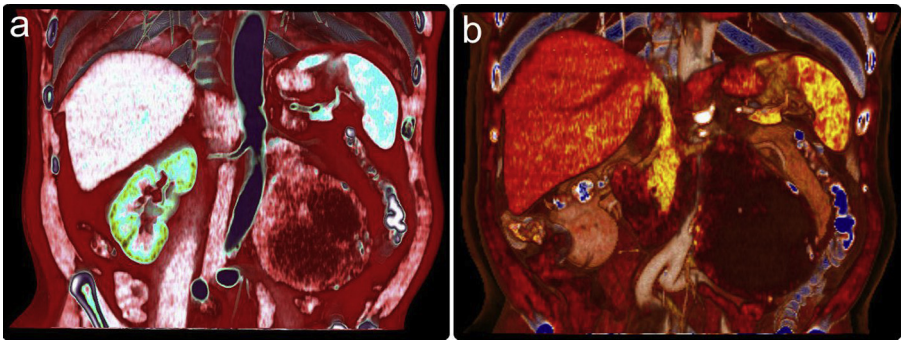

Image 2. CT color mapping image: (a) type 1, (b)type 1.

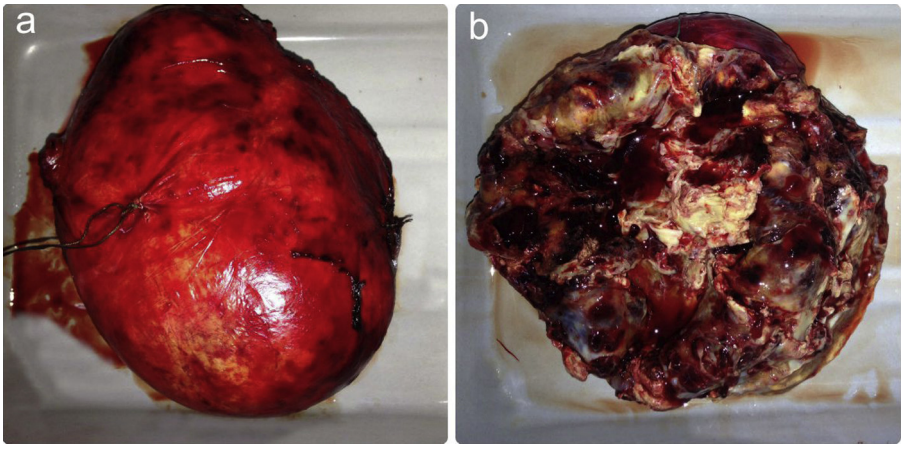

Image 3. Intraoperative finding—a organized hematoma: (a) outside view (b) internal view.

prognostically informative in this case. Decisively important were imaging diagnostic methods—USG and CT. As clinical cases of organized hematoma are quite rare, findings of retroperitoneal formation with irregular contours and infiltrative component inclined to consider the presence off retroperitoneal tumors. An additional method for differentiating tissue formation, was the use of converted color image in CT. Color imaging improves visual differentiation of the plots of contrast accumulation by fabrics. Thus, this formation accumulated contrast, that speaks for increased vascularization. Intraoperatively: formation with thick walls and heterogeneous structure. Based on the histological examination the diagnosis of hematoma in a phase of deep organization was confirmed. In our opinion, taking into consideration the retroperitoneal location, structure and large size of the tumor, laparoscopic clinical intervention in this case is not appropriate. On the contrary open intervention was reasonable approach. Preoperative biopsy has a crucial role to set preliminary diagnosis.

6. Conclusion

Despite the fact that organized retroperitoneal hematomas are quite rare, their diagnosis requires detailed examination and ambiguous interpretation of the obtained results needs histological verification.

Conflicts of interest

No conflicts of interest.

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We haven't any sources of funding for our research.

Ethical approval

Ethical committee approval Danylo Halytsky Lviv National Medical University number 5/2014.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

Taras Ivankiv—concept and design.

Oleksii Ogurtsov—data analysis, interpretation, writing the paper.

Galina Pokhylevych—data collection.

Guarantor

Taras Ivankiv, MD, PhD.

Oleksii Ogurtsov, MD.

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