Retroperitoneal Candidial Abscess
B Davachi, M Hosseini, T Akhondzadeh, M Zare, M Talaei-Khoei

Citation

Abstract
A rare case of retroperitoneal candidial abscess is described. The patient was an adult woman with two-month history of vague left flank pain. Physical examination revealed a non-tender mass at the left flank. Imaging findings showed a retroperitoneal mass with central necrosis. On the basis of these findings, the provisional diagnosis of retroperitoneal abscess or sarcoma was made, so percutaneous aspiration was performed and thick purulent secretions were aspirated. The pathologic examination revealed candida albicans abscess.

INTRODUCTION
The most important differential diagnoses of a retroperitoneal mass are benign and malignant neoplasms, pyogenic abscess and hematoma. We report a candida albicans abscess in the retroperitoneum, so when a patient presents with a retroperitoneal mass, it should be borne in mind the possibility of fungal abscess, especially in immunocompromised patients.

CASE REPORT
A 48-year-old female presented with a two-month history of vague left flank pain, referring to the lower back and between the scapulas. Also she noted abdominal distension and lower extremities edema progressing over several months as well as irregular menstrual cycles. She had no irritative symptoms of the genitourinary system such as dysuria or frequency, at presentation. Physical examination showed fullness in abdominal percussion, 2+ edema in lower extremities and a huge non-tender mass at the left flank. The vital signs were normal. There was no evidence of inflammation (erythema and heat) at the left flank.

She had a past history of diabetes mellitus, for which she had been prescribed glibenclamide.

The lab test results were as follows: WBC = 5840/mm3, PMN = 60%, RBC = 3570*10^3, Hct = 28, FBS = 250 mg/dl, HbA1c = 11%, AST(SGOT) = 36 mg/dl, ALT(SGPT)=37, Total Bilirubin = 1, Direct Bilirubin = 0.2

CT scan demonstrated an ill-defined mass with central necrosis in the retroperitoneal space at the left side which had deviated the left kidney and adrenal gland anteriorly. Also it showed splenomegaly and ascites. Selected images are shown in figure 1. On the basis of the imaging findings, the provisional diagnosis of retroperitoneal abscess or sarcoma was made, so percutaneous biopsy was performed and thick purulent secretions were aspirated. The pathologic examination revealed candida albicans abscess. The abscess drainage was performed and fluconazole was prescribed. The patient became well after treatment.

Figure 1
Figures 1-4: Contrast-enhanced CT scan demonstrates an ill-defined mass with central necrosis in the retroperitoneal space at the left side which deviates the left kidney and adrenal gland anteriorly.
Retroperitoneal candidial abscess is a rare disease that has been reported in a few articles \cite{1,2,3,4,5,6,7,8}. This case reminds us when a patient presents with a retroperitoneal mass, it should be borne in mind the possibility of fungal abscess, even if there is no evidence of acute infection (especially in immunocompromised patients). Differential diagnoses of a retroperitoneal mass are retroperitoneal benign and malignant neoplasms, pyogenic abscess and hematoma. Candida organisms are yeasts, that is, fungi that exist predominantly in a unicellular form. They are more than 150 species of candida, but only nine are regarded as frequent pathogens for humans. They are C. albicans, C. guilliermondii, C. krusei, C. parapsilosis, C. tropicalis, C. pseudotropicalis, C. lusitaniae, C. dubliniensis and C. glabrata \cite{9}.

Candida organisms are yeasts, that is, fungi that exist predominantly in a unicellular form. They are more than 150 species of candida, but only nine are regarded as frequent pathogens for humans. They are C. albicans, C. guilliermondii, C. krusei, C. parapsilosis, C. tropicalis, C. pseudotropicalis, C. lusitaniae, C. dubliniensis and C. glabrata \cite{9}. Candida albicans organisms are the most common and have been recovered from soil, hospital
Sarcomas include 90% of these malignant tumors and the sarcomas, extragonadal germ cell tumors and lymphoma. The most common retroperitoneal malignant tumors are Teratoma is a cystic mass, so it is not suspected in this case. With the exception of liposarcoma, which may contain identifiable fat density on CT, the histological type of a soft-tissue sarcoma cannot be reliably identified on CT. Areas of necrosis or hemorrhage may result in heterogeneous attenuation within the lesion.

Other differential diagnosis of this case is retroperitoneal neoplasms. Most primary retroperitoneal tumors arise from one or more of the mesenchymal tissues of the retroperitoneum. Others are derived from neuroectodermal elements or from remnants of the urogenital ridge. The great majority of mesenchymal tumors in the retroperitoneum are malignant. Some benign tumors are never discovered during life and many malignant tumors grow to enormous size before their presence is suspected. The commonest primary retroperitoneal benign tumors are lipoma, teratoma, neurogenic tumors and paraganglioma. Lipomas are encapsulated masses composed mostly of mature fat cells. There are no plain film findings to indicate the benign nature of the fatty tumor, but on CT the capsule that defines the outer limits of mass may be seen. Aside from having an occasional thin septum or strand of fibrous tissue, the interior of the mass is homogenously radiolucent.

Benign nerve sheath tumors include schwannomas (neurilemmomas) and neurofibromas. They have similar radiologic features and usually appear as smooth, discrete, round or oval masses.

Teratoma is a cystic mass, so it is not suspected in this case. The most common retroperitoneal malignant tumors are sarcomas, extragonadal germ cell tumors and lymphoma. Sarcomas include 90% of these malignant tumors and the most common types in order of frequency are liposarcoma, leiomyosarcoma and malignant fibrous histiocytoma (MFH). Liposarcomas are the most common primary retroperitoneal neoplasms. Lipogenic liposarcomas are of a radiolucency similar to that of normal fat, myxoid liposarcoma occur in range of densities between the densities of fat and muscle, pleomorphic liposarcoma, the least common type have a density similar to that of muscle. Leiomyosarcomas are especially inclined to undergo cystic degeneration. Solid leiomyosarcomatous tissue, on the other hand, tends to be hypervascular. Malignant fibrous histiocytomas tend to be hypervascular and aggressive in their local growth. Calcification is another non-specific finding. Fibrosarcomas and rhabdomyosarcoma appear in young patients, so they are not suspected in this case. With the exception of liposarcoma, which may contain identifiable fat density on CT, the histological type of a soft-tissue sarcoma cannot be reliably identified on CT.

CORRESPONDENCE TO

Mohammadreza Hosseini, MD
Department of Radiology, Ghaem Hospital, Ahmadabad street, Mashhad University of Medical Sciences, Mashhad, Iran
Fax: +98 511 8409612
Email: mrohosseini@yahoo.com

References


Author Information

Behrooz Davachi, M.D.
Department of Radiology, Ghaem Hospital, Mashhad University of Medical Sciences

Mohammadreza Hosseini, M.D.
Department of Radiology, Ghaem Hospital, Mashhad University of Medical Sciences

Taher Akhondzadeh, M.D.
Department of Radiology, Ghaem Hospital, Mashhad University of Medical Sciences

Mohammad A. Zare, M.D.
Department of Radiology, Ghaem Hospital, Mashhad University of Medical Sciences

Mojtaba Talaei-Khoei, M.D.
Department of Radiology, Ghaem Hospital, Mashhad University of Medical Sciences