

Leiomyosarcoma of the inferior vena cava extending into the right atrium and ventricle

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Aim: The aim is to present a case of rare malignant tumor, leiomyosarcoma of the inferior vena cava (IVC) with the involvement of the liver and intravascular extension into the right atrium and ventricle.

Case report: 50-year-old male patient presented to the Emergency Department with upper abdominal pain and meteorism during the past month, without any medical history of chronic illness. After physical exam and blood test, abdominal ultrasonography was performed which verified an expansive liver formation. Transthoracic echocardiography showed a large echogenic mobile mass extending from the IVC into the right atrium and ventricle, a differential diagnosis tumor or thrombi. Abdominal computer tomography showed a large hyperdense avascular mass with central necrosis in the left liver lobe, thrombosis of portal vein and filling defect of the inferior vena cava from the hepatic veins to the right atrium and ventricle. After taking biopsy, histochemical and immunohistochemical analysis confirmed a diagnosis of leiomyosarcoma. Considering the findings of computer tomography and echocardiographic characteristics of described mass into the right atrium and ventricle we concluded that it is probably a leiomyosarcoma of IVC with intravascular extension. Taking into account the pathohistological diagnosis, the stage of disease at the time of diagnosis, the laboratory and ultrasonography signs of liver dysfunction the Expert Consilium concluded that operative or any active treatment is not indicated.

Conclusion: Leiomyosarcoma of the inferior vena cava is malignant mesenchymal tumor, with low incidence and prevalence. Occurrence of this tumor in the III segment of the inferior vena cava by Kulazlat classification is especially rare. It is important to note that it is a possible and uncommon differential diagnosis of a right atrium tumor¹⁻³.

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LITERATURE

1. Kapoor R, Bansal A, Sharma SC. Leiomyosarcoma of inferior vena cava: case series of four patients. *J Cancer Res Ther.* 2015 Jul-Sep;11(3):650. <https://doi.org/10.4103/0973-1482.138029>
2. Gowda RM, Gowda MR, Mehta NJ, Osborne R, Bixon R, Vasavada BC, et al. Right atrial extension of primary venous leiomyosarcoma: pulmonary embolism and Budd-Chiari syndrome at presentation - a case report. *Angiology.* 2004 Mar-Apr;55(2):213-6. <https://doi.org/10.1177/000331970405500215>
3. Lotze U, Reponova J, Muth G, Oltmanns G, Reich HC, Etzrodt G, et al. Leiomyosarcoma of the inferior vena cava extending into the right atrium: a rare differential diagnosis of a right atrial tumor with fatal outcome. *Herz.* 2012 Aug;37(5):573-8. <https://doi.org/10.1007/s00059-011-3580-y>