



KARNATAKA RADIOLOGY EDUCATION PROGRAM

CASE PRESENTATION

Case of leiomyosarcoma of IVC

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Clinical history

- A 46 year old female presented with complaints of vague abdominal pain and bilateral lower limb swelling since 15 days
- Past history: no comorbidities
- Previous history: right ovarian cystectomy and total abdominal hysterectomy
- General physical examination: within normal limits
- Plain CT done outside: IVC thrombosis with dysmorphic liver parenchyma. Enlarged retroperitoneal lymph nodes.
- The patient underwent contrast abdomen and pelvis in KLE

CT Venous axial



CT Venous coronal



CT venous sagittal



CT venous axial



Findings:

CECT ABDOMEN & PELVIS:

- There is presence of a heterogeneously enhancing soft tissue density mass lesion in the anterior pararenal space of the retroperitoneum on the right side which is seen to infiltrate into the lumen of the infra-hepatic segment of inferior vena cava
- **Cranially**, the lesion is seen to extend into the intrahepatic segment of IVC resulting in their complete luminal obliteration.
- The lesion is seen to indent the segment V of the right lobe however, no infiltration noted.
- No evidence of extension into the right atrium is seen.

Findings:

- The lesion shows no evidence of hemorrhage or calcification.
- There is presence of hypodense filling defect in the infrarenal segment of IVC extending caudally with its near total luminal obliteration.
- Abnormally dilated posterior intercostal veins are seen as collaterals draining into the inferior vena cava.
- Hepatic parenchyma appears unremarkable.
- The lesion is seen separately from the right adrenal gland.

DIFFERENTIALS TO BE CONSIDERED

1. Leiomyosarcoma of IVC
2. Other mesenchymal tumors that can infiltrate the IVC:
leiomyomatosis, undifferentiated pleomorphic sarcoma

Leiomyosarcoma

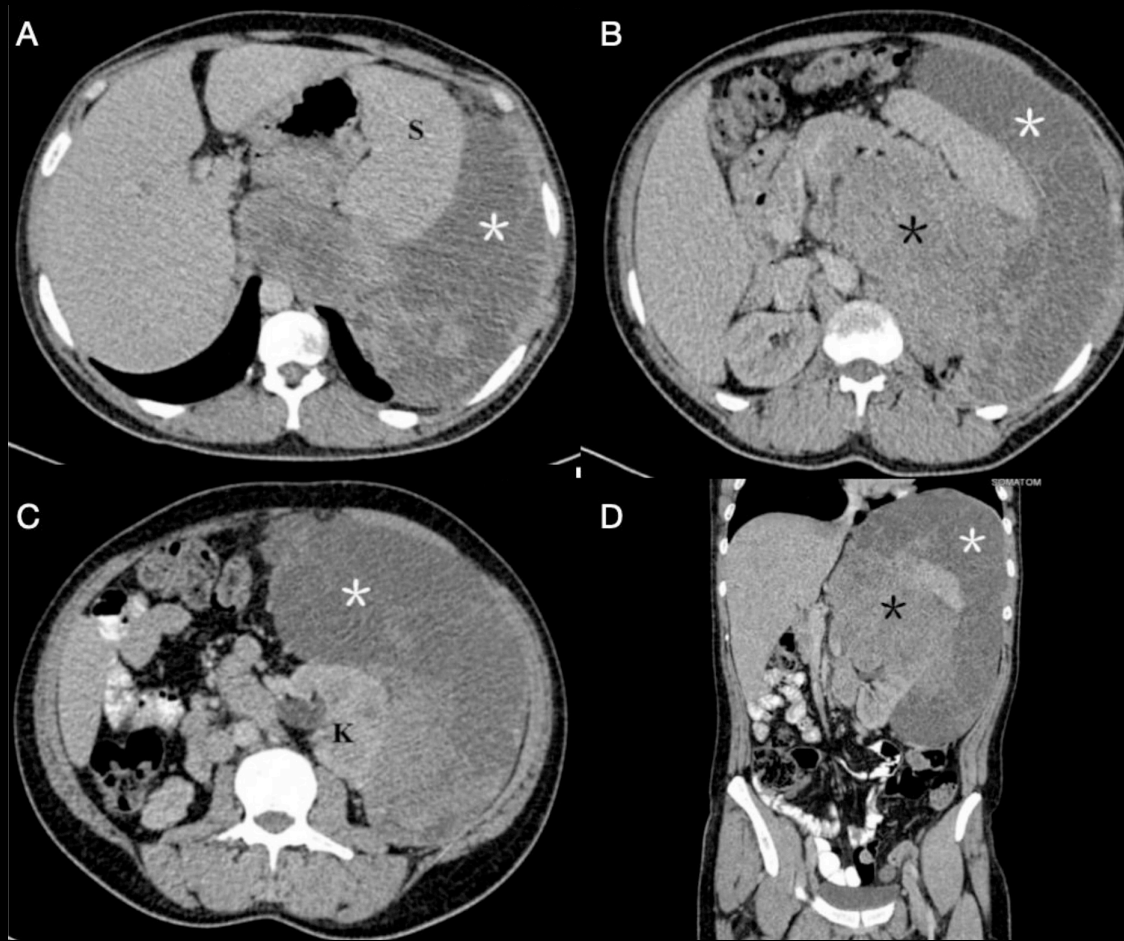
<u>POINTS IN FAVOUR</u>	<u>POINTS AGAINST THE DIAGNOSIS</u>
Most common primary malignancy of the IVC	
4-6 th decade of life, female	
Extraluminal and intraluminal tumor of the inferior vena cava.	
Smaller lesions are more homogeneous, larger may show necrosis or hemorrhage	



Enhancing mass along rightward aspect of the IVC, growing into it, with a combination of tumour and bland thrombus extending into the right atrium.

Undifferentiated pleomorphic sarcoma/myxoid fibrous histiocytoma

<u>POINTS IN FAVOUR</u>	<u>POINTS AGAINST THE DIAGNOSIS</u>
Absence of intratumoral fat	6-8 th decade of life
Presence of cystic/necrotic change	Calcifications (+/-)
Large heterogenous mass with invasion	High tendency towards metastasis

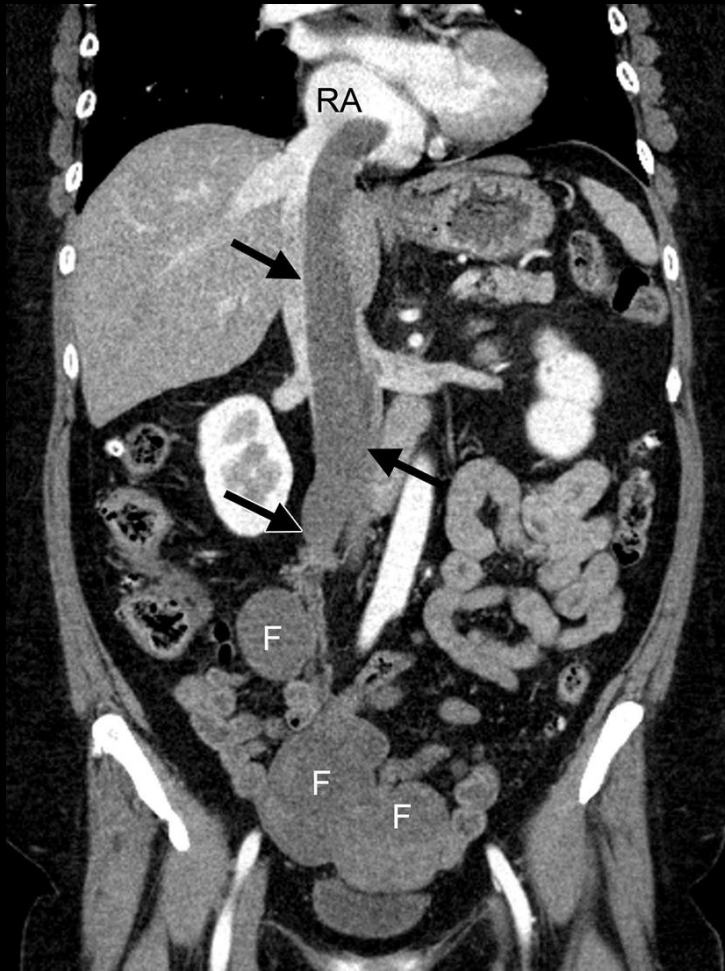


Large, circumscribed mass in left retroperitoneum encasing the left kidney (K) with negative beak sign along with anterior displacement of the spleen (S). The lesion is heterogeneous with areas of solid soft tissue (black asterisk) and cystic and myxoid components (white asterisk)

Intravenous leiomyomatosis




Characterised by extension of histologically benign smooth muscle tumour arising from either the wall of a vessel or from a uterine leiomyoma into venous channels

<u>POINTS IN FAVOUR</u>	<u>POINTS AGAINST THE DIAGNOSIS</u>
Previous history of hysterectomy (?)	Continuity in intraluminal tumor growth from the pelvic veins is seen in few of the cases. In our case, Pelvic veins appeared unremarkable.

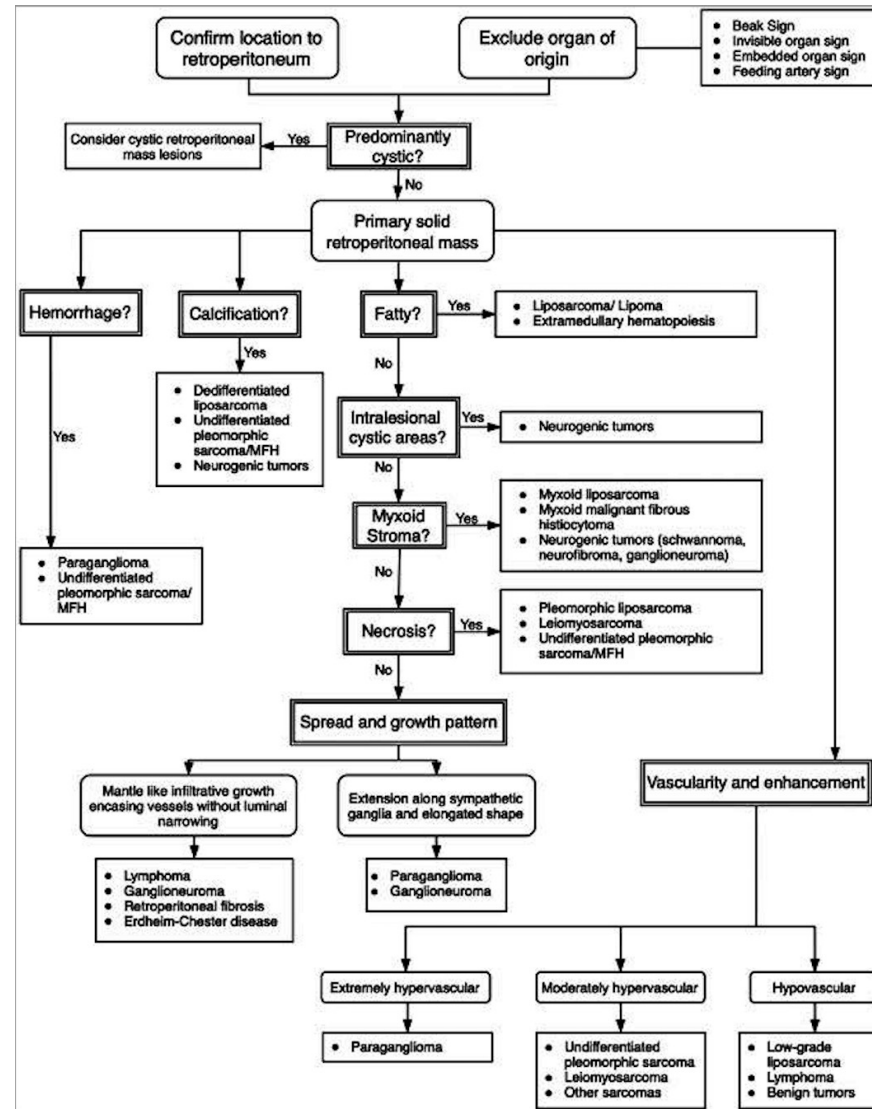


A long intracaval tumor (black arrows) contiguously extends from the fibroid uterus (F) to the right gonadal vein, IVC, and right atrium (RA).

FOLLOW UP

 KLES DR. PRABHAKAR KORE HOSPITAL MEDICAL RESEARCH CENTRE NEHRU NAGAR, BELAGAVI-590010	  MC-2352			
LABORATORY REPORT				
Patient Name : [REDACTED]	IP / OP No : 10080161/7546337			
Ordered Loc : Semi Private Room Bed No: HA11	Gender : Female			
Referred By : Dr. A Unit VISHWANATH HESARUR	Age : 47 Y 0 M 13 D			
Class : Semi Pvt - Hospital	Vch No : 5609			
Current Loc : Semi Private Room HA11	Collection Dttm : 13/08/2024 11:47 AM			
Sample No : 24460848	Reported On : 16/08/2024 10:48 AM			
Investigations	Result	Method	Unit	Reference Range
HISTOPATHOLOGY				
Sample Type : GENERAL				
BIOPSY NO:	3973/24			
SITE:	Right paracaval region			
GROSS:	Received multiple grey white soft linear soft tissue pieces.			
MICROSCOPY:	Sections studied show cores of tissue showing neoplastic spindle cells arranged in fascicles and bundles. Few cells show bizzare nuclei. Occasional cells show multinucleation. The mitotic activity is approximately 1-3/10HPF.			
IMPRESSION *	Features are that of soft tissue sarcoma, favors leiomyosarcoma.			
	NOTE: Kindly correlate clinicoradiologically.			
ADVICE :	IHC			
NOTE : Slides and Blocks will be saved for 10 years, specimen will be preserved for 3 months if not fully embedded.				

APPROACH TO RETROPERITONEAL TUMORS



Thank you