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Case Report

Case report on a retroperitoneal sarcoma encasing left common iliac vein in a 65 years old elderly woman

Meet Rajeshbhai Godhani*, Nilay Kaushik Kandoi

Department of General Surgery, Government Medical College, Surat, Gujarat, India

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***Correspondence:**
Dr. Meet Rajeshbhai Godhani,
E-mail: godhanimeetrocks@gmail.com

ABSTRACT

A 65 years old married female patient presented to us with chief complaints of dull aching back pain, radiating upto left thigh since 1 year. MRI pelvis revealed a large heterogeneous solid lesion in retroperitoneum in the paravertebral region. Intraoperatively, the mass was encasing the Left Common Iliac Vein which was lighted. Since, the presentation was chronic the venous collaterals in the left lower limb was already formed and there was no need for venous reconstruction. The Left lower limb did not suffer any complications and the patient was discharged on 10th post operative day. When there is chronic obstruction of Common Iliac Vein, usually venous collaterals develops and the lower limb can be salvaged without venous reconstruction.

Keywords: Retroperitoneal sarcoma, Left common iliac vein ligation, Chronic collaterals

INTRODUCTION

Retroperitoneal leiomyosarcoma is a malignant neoplasm that shows smooth muscle differentiation. It is the second most common sarcoma to affect the retroperitoneum. Retroperitoneal leiomyosarcomas may grow to large sizes before detection and may be an incidental finding at imaging.

When symptomatic, retroperitoneal leiomyosarcoma may cause compressive symptoms, including pain.

Retroperitoneal leiomyosarcoma most commonly manifests as a large soft-tissue mass, with areas of necrosis. The most frequent pattern of growth is an entirely extravascular mass.

Less commonly, leiomyosarcoma may demonstrate both extravascular and intravascular components.[1] Rarely, retroperitoneal leiomyosarcomas are completely intravascular, typically arising from the inferior vena cava.

CASE REPORT

A 65 year old married female patient was presented to general surgery OPD with chief complaint of dull aching back pain, radiating up to left thigh since 1 year, which relieved on taking medications, not associated with burning micturition, fever, cough, weight loss. All routine blood investigations were within normal limit. Physical examination reveals 10×5 cm^2 well defined non tender lump is palpable in the suprapubic region with no mobility, no scars, no skin pigmentation, no visible pulsations and no dilated veins. No fluid thrill or shifting dullness. No history of any surgical intervention. No history of weight loss, anorexia, nausea, vomiting and burning micturition.

MRI pelvis is suggestive of fairly large heterogenous predominantly solid lesion measuring-8.8×10×18.9 cm in the left retroperitoneal paravertebral region in close proximity to lumbar vertebral bodies, located posterior to the left ureter and displacing the left psoas muscle laterally. There is significant compression of the lower

ureter near the pelvis brim causing moderate to severe hydronephrosis and hydroureter. The left common, external and internal iliac arteries is elevated and displaced anteriorly by the lesion.

Intraoperatively the mass was found to be encasing the left common iliac vein, which was ligated and mass excised.

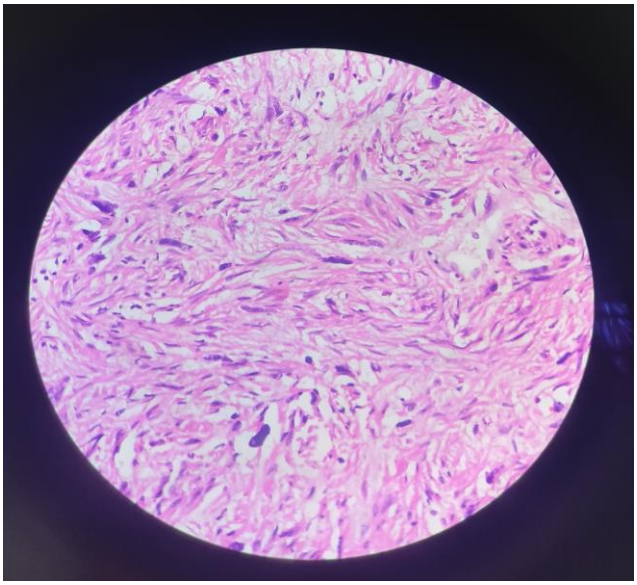

Figure 1: Microscopic view of specimen showing pleomorphic leiomyosarcoma.

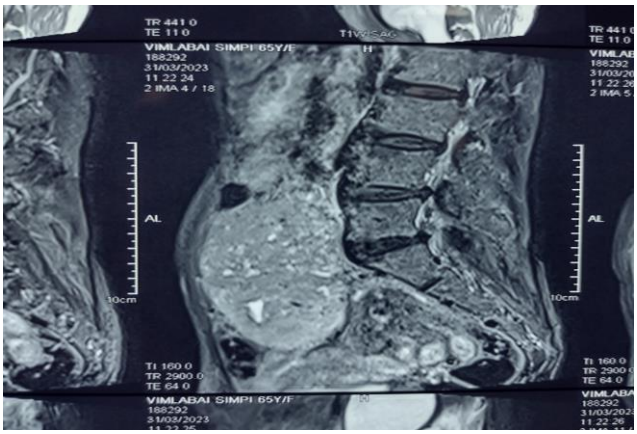

Figure 2: MRI pelvis (Sagittal section) showing solid lesion in close proximity to lumbar vertebrae.

Upon gross examination-specimen is a multilobulated structure, cut surface of which shows heterogenous areas and one vessel like structure (common iliac vein).

Microscopic examination-shows tumor cells arranged in interlacing and intersecting short and long fascicles. Cells show marked pleomorphism, cells are round/oval/spindle shaped having round to oval nuclei with coarse chromatin, prominent nucleoli at places and variable amount of cytoplasm.

Figure 3: Excised specimen of retroperitoneal sarcoma.

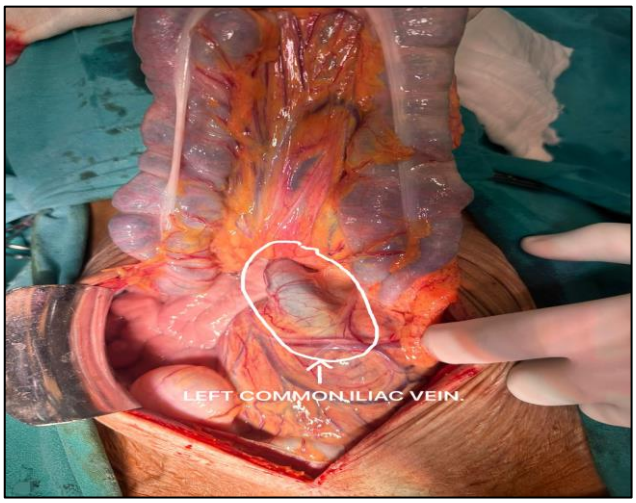

Figure 4: Intra-op picture showing left common iliac vein getting encased by retroperitoneal sarcoma.

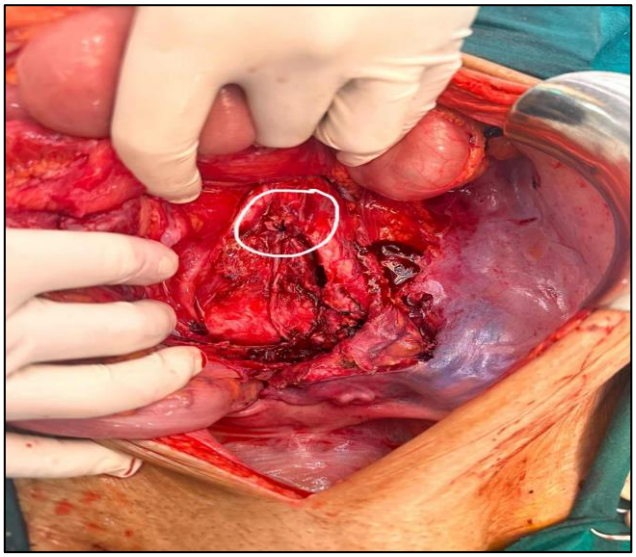

Figure 5: Intra-op photo showing ligation of left common iliac vein.

Tumor cells are immunoreactive for vimentin, SMA and Desmin. Tumor cells are immunonegative for S-100 and CD34. These Findings are suggestive of "Pleomorphic Leiomyosarcoma".

The postoperative period remained uneventful and the patient was discharged on 10th post operative day.

DISCUSSION

Retroperitoneal tumors are an extremely heterogeneous group of neoplasms, 85% of which are malignant. Liposarcomas constitute between 45-55% of retroperitoneal masses.[6]

Retroperitoneal sarcomas present 80% of time as asymptomatic abdominal mass. Symptoms can also be related to mass effect/local invasion which may lead to pain, GI obstruction, feelings of early satiety, and weight loss. In addition, neurologic and the muscular skeletal symptoms are referred to lower extremities.[7]

After a physical examination CT scan provides an excellent understanding of the relationship between nearby structures and is critical to preoperative planning. A patient presenting with a palpable abdominal mass, should be have a high-resolution, thin-cut CT scan with intravenous and oral contrast since these images allow for further distinction between intra-abdominal and retroperitoneal structures. This allows discussion of need for biopsy if indicated, operative plan, and preparedness of operative team, and discussion with patient regarding risks and benefits. Differential diagnosis includes primary neoplasm arising from a retroperitoneal visceral structure (e.g., pancreas, adrenal glands, kidneys, and duodenum), retroperitoneal sarcoma, lymphoma, metastatic lesion.[8]

The definitive treatment of primary retroperitoneal sarcomas is surgical resection.[9] Chemotherapy and radiotherapy without surgical debulking have rarely been beneficial, when used alone or in combination.[9] Pre-, intra- or post-operative radiotherapy has, however, been of benefit in some patients, but, in most instances, does not improve patient prognosis.[9] As these tumors are locally invasive, extensive and aggressive local resection of the tumor and any adjacent organs should be performed at the time of presentation. Resection of the tumor en-bloc with adjacent adrenals, kidneys, or segments of small bowel, or colon is often required.[10]

Primary vascular retroperitoneal Sarcomas can present with chronic venous occlusion secondary to tumoral obstruction. The complete occlusion of the common iliac vein is a slow but progressive process, which in turn leads to the development of collateral venous outflow via the gonadal, lumbar, retroperitoneal, and abdominal wall veins. Surgical planning and preoperative imaging for iliac leiomyosarcoma with complete lumen occlusion should specifically investigate for venous collaterals, as this may preclude the need to reconstruct the vein and only ligate it after en-bloc resection. Management of iliac vein following resections includes-reconstruction using patch repair, interposition graft/ ligation.[4]

Ligation of the common iliac vein in patients with good collateral venous outflow presents some advantages compared to reconstruction. There is no need for life-long anticoagulation compared to synthetic grafts due to the reduced risk of pulmonary embolism as there is no chance of graft thrombosis.[5] However, there are side-effects after ligation such as lower-extremity edema and symptomatic lower-extremity deep venous thrombosis, however, these are typically acute postoperative complications that resolve with time.

CONCLUSION

In patients having chronic iliac vein obstruction due to leiomyosarcoma, ligation of vein is a better option, since in venous reconstruction patient would have to take anticoagulants for long duration which is not the case if we ligate the vein. The limb will survive because of development of multiple venous collaterals due to chronicity of obstruction.

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