

Disseminated Peritoneal Leiomyomatosis following Laparoscopic Supracervical Hysterectomy

Niharika Prasad

Assistant Professor, Department of Radiology, Dr. D.Y. Patil Medical College, Hospital & Research Center, Pune, Maharashtra, India

Corresponding author: Dr. Niharika Prasad, Dr. D.Y. Patil Medical College, Hospital & Research Center, Pune, Maharashtra, India

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A B S T R A C T

Introduction: Leiomyomatosis peritonealis disseminate is an uncommon pathology characterized by multifocal proliferation of smooth muscle nodules like uterine myomas. Fibroids may be solitary or numerous and display atypical variants such as disseminated peritoneal leiomyomatosis, benign metastasizing leiomyoma, intravenous leiomyomatosis, retroperitoneal leiomyomatosis and parasitic leiomyoma.

Case report: This case report highlights the presentation of disseminated peritoneal leiomyomatosis in a forty-six-year female with a history of past hysterectomy for uterine leiomyoma. Multiple heterogeneously enhancing lesions were seen in abdomen and pelvis on computed tomography and magnetic resonance images. It was subsequently proved on biopsy.

Conclusion: The associated risk of recurrence, importance of past surgical history and possibility of malignant transformation shows the importance of timely diagnosis and treatment of this condition.

Keywords: Peritoneal Leiomyomatosis, Hysterectomy, Recurrence, Malignant

INTRODUCTION

Uterine leiomyomas occur commonly in uterus of women of reproductive age with an incidence of 20-40 percent. Being estrogen dependent these regress spontaneously in post-menopausal age. Disseminated leiomyomatosis peritonei manifests as multiple smooth muscle implants in the peritoneum of the abdomen and pelvis. This has been reported as a complication in patients who have undergone hysterectomy with power morcellation.¹

Extrauterine leiomyomas described in the literature are benign metastasizing leiomyoma, disseminated peritoneal leiomyomatosis, intravenous leiomyomatosis, parasitic leiomyomata, and retroperitoneal types.²

CASE REPORT

A middle aged lady came with complaints of abdominal pain since three months. She did not have any constitutional symptoms. She did not have any constipation or diarrhea. She had history of hysterectomy few years back which was indicated for removal of large fibroids. There was no power morcellization done at the time of surgery. Laboratory investigations were within normal limits.

A non contrast CT showed well-defined soft tissue density masses measuring 6x4 to 15x11 cm in the abdomen and pelvis. The lesions had no calcifications or necrosis. Contrast enhanced computed tomography showed heterogeneous enhancement in the above mentioned lesions. [Figure 1,

Figure 2 and Figure 3]. There was no surrounding mesenteric fat stranding or abscesses around the lesions. The bowel loops did not show any wall thickening or adherence to the masses. Bowel loops were normal in caliber with no fluid levels. Mesenteric and retroperitoneal lymph nodes were not enlarged. There was no intra abdominal metastasis. There were no focal lesions in the liver. Uterus was absent- post op status. Ovaries were normal. Minimal ascites was present. Non contrast MRI showed that the lesions were T1 hypo to isointense [Figure 4], isointense on fat suppressed T1 weighted images resembling smooth muscle [Figure 5] and heterogeneously hypointense on T2 weighted images [Figure 6]. No significant diffusion restriction was present [Figure 7 & Figure 8].

Biopsy was done for confirmation which displayed uterine leiomyoma appearance with smooth muscles and no atypical cells suggesting benign nature of lesions.

DISCUSSION

Peritoneal leiomyomatosis is an uncommon condition in which multiple smooth muscle nodules develop in the abdomen & pelvis. It is more common in middle aged women. The etiopathogenesis is believed to link to hormonal factors- increased endogenous or exogenous estrogen.¹ Rare intravenous, disseminated, retroperitoneal, parasitic and metastasizing forms may be seen. Previous history of hysterectomy may be important.² Ultrasound, CT and MRI

are modalities for diagnosis of this condition and cross sectional imaging is useful for diagnosis as well as follow up.

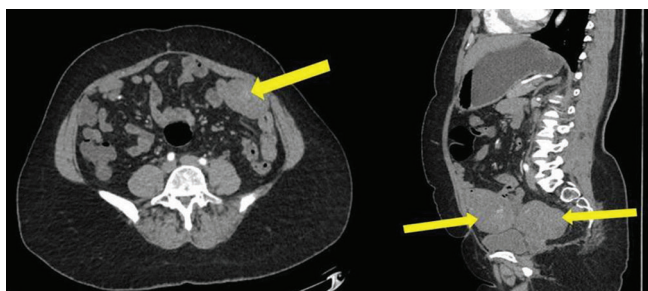


Figure-1: Axial CT in the arterial phase shows a well-defined, heterogeneously enhancing soft tissue lesion in left lower abdomen. The lesion has smooth margins and no internal cystic areas or calcification. There is no surrounding fat stranding or desmoplastic reaction. **Figure-2:** Two well defined heterogeneously enhancing mass lesions are seen in the pelvis on sagittal arterial phase CT. Fat planes with the urinary bladder are maintained.

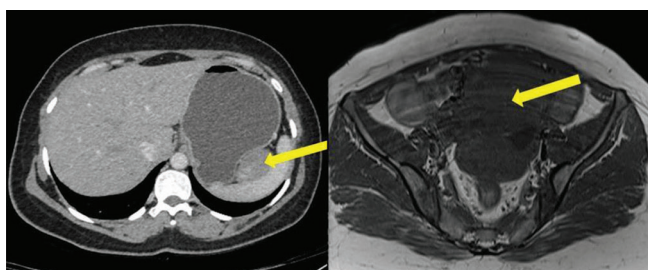


Figure-3: Axial CT in the arterial phase shows a similar lesion in the left hypochondrium adjacent to the spleen. **Figure-4:** Axial T1 weighted MR image shows hypointense mass lesions in the pelvis.

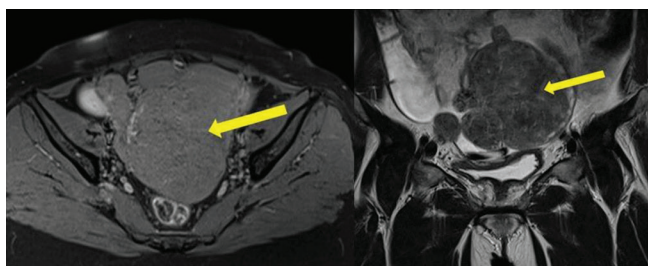


Figure-5: Axial fat suppressed T1 weighted image shows the lesions to be of intermediate signal intensity. **Figure-6:** Coronal T2 weighted image shows heterogeneously hypointense lesions in pelvis resembling leiomyomas.

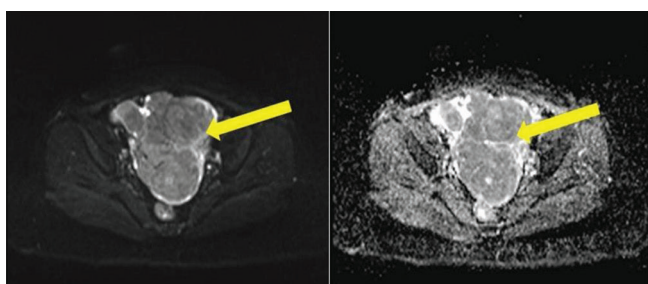


Figure-7: Axial diffusion weighted image shows hypointense mass lesions in the pelvis. **Figure-8:** Corresponding ADC image shows the lesions to be hypointense.

The signal intensity of the nodules matches that of muscle on imaging. Recurrence rate after treatment for this disease is high.³

Extra uterine sites of involvement such as lungs, heart, and brain are rare.⁴ This condition has to be differentiated from malignancy and PET (positron emission tomography) will show absence of uptake in this condition while neoplasm will show increased uptake.⁴ The risk of transformation to malignancy in this condition is low ~ 2-5 percent.⁵ Few cases have been successfully treated with angiography and embolization of feeding omental branches.⁶ Treatment options comprise surgical resection of leiomyomatous tumors, pharmacological treatment and hormonal or surgical castration. According to few studies, laparoscopic morcellation can result in relapse.⁷

CONCLUSION

Multifocal peritoneal nodules resembling smooth muscle are seen in the disease 'Leiomyomatosis peritonealis disseminata'. It should be considered as a differential diagnosis in females following myomectomy or hysterectomy. It is associated with a high risk of recurrence.

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