Uterine Leiomyomata with Liver Metastsis: A Case Report

Introduction:

Leiomyomas are the most common benign monoclonal neoplasm of smooth muscle cells of uterus..The incidence increases with age,4.3 per 1000woman years for 25-29 years old and 22.5 for 40-44 years old. Leiomyomata presents as abnormal uterinebleeding, pelvic pain, back pain, urinary symptoms.The different variants are: mitoticallyactive leiomyoma , cellular leiomyoma , leiomyoma with bizzare nuclei (also called atypical orsymplastic), smooth muscle tumor of uncertain malignant potential (STUMP),while the malignantvariant are the Leiomyosarcoma (LMSs).

LMS arises from smooth muscle cells or from precursor mesenchymal stem cells.The peak incidence of uLMS occurs in perimenopausal age group but can also start after the thirddecade of life. About 3-7% of all uterine malignancies are uterine sarcoma and in uterine sarcomasLMS accounts for 80% .**[1].**

uLMS presents with abnormal vaginal bleeding, pelvic mass , pain in abdomen, rapidly growing uterine mass in post menopausal women ,average diameter is 10 cm .Most common site is uterine corpus, rarely cervix.

Suspicion of uLMS should be there if MRI features suggest (a) high signals in T2W1 and abnormal signals in DW1(b) high signal in T1W1 (c) ill defined border of tumor mass with high cell density in mass, suggesting hemorrhage within the mass and infiltirative growth of mass.

Gross description represent often a solitary, fleshy, bulky mass within the myometrium, Histopathology represents spindle cell type, marked cytologicalatypia, > or = 10 mitosis/10 high power fields, tumor cell necrosis**.**

Case presentation:

A young nulliparous woman in late thirties, was referred to our hospital with heavy menstrual bleeding, abdominal pain associated with an abdominal mass. Her Eastern Cooperative Oncology Group (ECOG) performance status was 1, she was pale with a hemoglobin 7 gm/dl for which 3 units of blood were transfused, her breast examination was normal. On abdominal examination - amass arising from pelvis of approximately 15 x 15 cm which was well defined, tender and ballotablesideways, was palpable. Pelvic examination revealed a uniformly enlarged uterus with a well-definedsmooth surfaced mass which was palpated through the posterior fornix, inseparable from the uterus,probably arising from posterior part of fundus.

Abdominal ultrasound revealed bulky uterus with uterine fibroid (10 x 7.6 x 7.3 cm). Contrast enhanced computed tomography of the whole abdomen revealed an enlarged anteverted uterus,with heterogenous lesion (8.2 x 8.4 x 7.1 cm) in posterior myometrium causingdisplacement and compression of endometrial stripe. A smaller peripherally enhancing focal lesion of 2x 1.3 cm seen in anterior aspect of fundus. The anterior surface of fundus of uterus was abuttingrectum. The lesion was causing mass effect by displacing adjacent bowel loops.Liver was normal size. Multiple non enhancing discrete variable size (12.7 x 13 mm) hypodense lesionseen in both lobes of liver suggestive of metastasis. (Fig 1) Few discrete sub-

centimetric lymph nodeswere seen in para-aortic region- 9 x 5mms. There was no history of radiation exposure, genetic(cancers or others) syndrome running in family, no history of early menarche and no history of tobacco or alcohol use.

Endometrial tissue was sampled and it was secretory with no other pathology identified, while the liver and uterine mass biopsy were inconclusive. Since the patient was deemed operable, therefore, an exploratory laparotomy was planned suspecting leiomyosarcoma.**Laparotomy findings**: Total abdominal hysterectomy with bilateral salpingo-opherectomy wasperformed. Liver surface was studded with firm nodules that were biopsied. There were fewdeposits in pelvic peritoneum and pouch of Douglas while rest of the peritoneal cavity was normal.Final histopathology was suggestive of leiomyomata in the uterus and dissemination in pelvis and liver.The patient has been on follow-up with ultrasound of abdomen and liver performed every 3-6 monthsever since and has completed 2 years uneventfully. No estrogen-based HRT was given howevertibolone 2.5 mg was given for 2 years and the patient remained symptom free. The liver depositsdecreased in size and have been stable ever since.

Discussion:

Uterine leiomyoma are the most common, solid, and benign monoclonal tumours of smooth muscle cells of the myometrium composed of extracellular matrix containing collagen, fibronectin, and proteoglycan and affecting 20% to 30% of women in their reproductive ages.Clinical symptoms occur in approximately 20%–30% of women who are older than 35 years. About60% of tumours are multiple as was seen in our patient.Symptoms include abdominal pain, abnormal uterine bleeding, infertility, constipation, urinaryproblems. Our patient presented with prolonged heavy bleeding. Multiple and huge masses can getdegenerations like hyaline, cystic, myxoid, atypical due to insufficient distribution of blood andtherefore may not be discernible separate from malignant masses. Leiomyosarcoma can sometimesmimic leiomyomas. Brohl et al. concluded that sarcomas are diagnosed in presumed fibroids aftersurgery in 1 in 340 women. That number increases to 1 in 98 in women 75 to 79 years of age. [2]

While deciding on treatment, the patient's age, presenting symptoms, and desire for fertility preservation all merit consideration. The locations and size of the leiomyomata will both determine the treatment.Leiomyomatosisperitonealisdisseminata (LPD) first introduced by Wilson et al in 1952, is a rareentity which is characterized by the presence of multiple subperitoneal or peritoneal smooth muscle nodules mimicking a malignant process.[3]The disease's asymptomatic nature may explain the disease's underestimated incidence of 1/10000000 [4]. It has been proposed that LPD arises under the influence of estrogen,metaplasia anddifferentiation of mesenchymal stem cells into smooth muscle cells occurs. Therefore, LPD isoften considered a premenopausal benign disease.

Patients are often asymptomatic or present as symptoms such as abdominal pain and discomfort, and irregular vaginal bleeding, hence, pre operative diagnosis of LPD is difficult. It is sometimes difficult to differentiate LPD from malignancy due to raised serum CA 125 and disseminated presentation. Ultrasonography, CT, and MRI are among the most effective diagnostic methods, but they are also not

effective in the differentiating from malignancies. In our patient CA 125 was not raised and CT scan could not differentiate between fibroid and sarcoma. MRI could not be done owing to logistic reasons. Histopathologic examination confirms the diagnosis of LPD. For women who do not desire fertility, a more extensive surgical approach with total abdominal hysterectomy, salpingo-ophorectomy, and debulking is done. Reported recurrence interval from 7 months to 8 yearsindicate that surveillance should take place for at least 3 years post initial resection. Liver metastasis is not a common presentation and conservative management may be effective as observed in this patient.

Conclusion:

Leiomyomatosis is a rare entity with no specific diagnostic criteria for confirmation of diagnosis clinically. They are often diagnosed postoperatively in patients operated for fibroids. Liver metastasis can be a rare presentation and may be managed without any active surgical or medical intervention.

Learning Points:

- LPD should be considered as differential diagnosis in patients who are presented withappearance of disseminated malignancy with uterine masses suggestive of fibroids.
- Follow up through imaging preferably through ultrasonography should be done for atleast 3 years.
- Leiomyosarcoma should be suspected in peri or post-menopausal women, whileleiomyomatosis usually occurs in the reproductive age group.

References:

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