BML: A Case Report and Discussion

- November 2, 2010 Marian Chamberlin, M.D.
- With special thanks to: Gary Adelson, M. D.
- Gert Van der Westhuizen, M.D.
  Patricia Jessee

47 year old woman of African descent, who had emigrated from West Africa two years before, presented to the emergency department complaining of left sided abdominal pain. In addition she complained of nausea, weakness, decreased appetite, night sweats and chills.

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Past history of C-sections times two. Laparotomy in 1996 for abdominal swelling with total abdominal hysterectomy, bilateral salpingo-oophorectomy, and resection of multiple leiomyomata in the pelvis.
No history of hypertension or diabetes mellitus.
Cigarettes ½ ppd. No alcohol use.
Family history negative for ASHD, DM, or cancer.

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WDWN female. Ht: 5’ 2” Wt: 143 lbs.
T: 98.3 R: 16 P: 97 BP: 137/67
Sclerae nonicteric. No adenopathy. Lungs clear. Heart regular. 1/6 SEM. Breasts benign.
Abdomen soft, not distended. BS present.
Long scar extends from xiphoid to pubic symphysis. Mild tenderness and fullness LLQ
and left periumbilical area, deep firm mass above the right inguinal ligament.

WBC 10.4  71% segs 18% lymphs
H/H 11.2/35.1 MCV 73.9
Plts 516,000
BUN 13, creat 1.0, alk phos 120,
bilirubin 0.6
UA: normal
CXR: Prominent interstitium. ? soft
 tissue mass left lung periphery.

CT Abdomen and Pelvis: Cholelithiasis. Left
hydronephrosis. Mass anterior right lobe of liver.
6.6 cm left periaortic retroperitoneal mass below
left kidney, abutting the left ureter. 4.0 cm mass in
left colonic gutter. 4 cm mass in the mesentery of
the right upper quadrant, near the ascending
colon. 4 cm mass in chain of right internal iliac
lymph nodes.
Laparotomy and biopsy of retroperitoneal mass medial and anterior to right iliac vessels. 50% resected. Pathology: Schwannoma. Low mitotic activity. No features of malignancy.


Similar stains were done on previous surgical specimen, and findings were consistent with leiomyoma.

Serology positive for previous Hepatitis A, B and C, with immunity to Hepatitis A and B. Hepatitis C positive by RIBA and PCR.
Referred to Vanderbilt gynecologic oncology service. Treated with Megace, tamoxifen, RU-486, thalidomide.


Patient started on treatment for diabetes mellitus and hypertension.
Anticoagulated for DVT right leg due to compression of right iliac vein and inferior vena cava by tumor. Developed severe urticaria on thalidomide. Developed severe depression. Transferred care to local hematologist-oncologist.

Started Femara. Developed headaches and mental status changes, extreme emotional lability. MRI of brain revealed 2.1 x 1.4 x 2.3 cm pituitary tumor impinging on optic chiasm.

Greenfield filter was placed. Patient underwent transphenoidal pituitary adenomectomy.

Pathology confirmed pituitary adenoma.

CT chest, abdomen, pelvis: 4 months of Femara

1.1 x 1.7 cm nodule RUL anterior to right hilum
0.7 x 1.7 cm left pleural based lesion
0.4 cm nodule posterior segment RUL
0.5 cm nodule anterior RUL

2.2 x 2.6 cm mass anterior right hepatic lobe
6.6 x 6.5 x 6.0 cm mass anterior to descending colon
4.3 x 4.1 x 5.0 cm mass left periaortic area
5.2 x 2.8 cm mass posterior to umbilicus
Ill defined mass right iliopsoas/posterolateral bladder
Ill defined mass left iliopsoas
8 months after starting Femara

- 1.8 x 2.4 cm nodule RUL abutting mediastinum
- 1.0 x 1.4 cm left pleural based nodule
- Multiple < 0.6 cm nodules RLL
- 2.8 cm mass anterior right hepatic lobe
- 6.8 x 8.0 cm mass anterior to mid descending colon
- 4.2 x 4.8 cm left periaortic retroperitoneal mass
- Mass posterior to umbilicus stable to decreased
- Mass left iliopsoas 4.1 x 3.8 cm
- Pelvic masses otherwise stable


4 years and 5 months after starting Femara

- 1.7 x 2.2 cm nodule RUL abutting mediastinum
- 1.0 x 1.4 cm left pleural based lesion
- 0.7 cm nodule posterior RUL
- 0.5 cm nodule posterior RLL
- 0.3 cm nodule base RLL
- Previous 0.6 cm nodule RLL absent
- 2.2 cm nodule anterior superior liver
- 8.2 x 9.3 cm mass left abdomen
- 3.6 x 5.3 cm left periaortic mass
- 3.6 x 6.2 cm mass right mesentery
- 2.5 cm nodule adjacent to ascending colon
- 3.9 x 7.6 cm lobular mass in location of right adnexa
- 2.9 x 5.1 cm mass left anterior rectus

Hospitalized twice for partial bowel obstruction from constipation and extrinsic compression of the bowel.
6 years and 6 months after starting Femara, patient underwent XRT with 3000 rads to bilateral psoas masses because of left flank, LLQ and groin pain due to enlarging leiomyoma left psoas muscle, with resolution of pain.

9 years and 1 month after starting Femara patient developed left low back pain radiating to LLQ and medial thigh due to internal hemorrhaging of left psoas leiomyoma. Patient was placed on Faslodex in place of Femara.

Referred to Vanderbilt orthopedic oncology. Radical retroperitoneal tumor resection. Left femoral nerve and lumbosacral trunk neurolysis with deep dissection. Excision of left psoas muscle and repair of left external iliac artery with Gortex graft. Required 8 units PRBCs, 4 units FFP, 2 units platelets and albumin.

Pathology: Malignant transformation of a leiomyomata into a leiomyosarcoma.
Received four cycles of doxorubicin and dacarbazine. 3000 rads to enlarging left anterior abdominal mass and 2000 rads to cystic mass by bladder, as both lesions outside the originally treated area.

10 years and 4 months after presentation

1.7 x 2.2 cm mass RUL abutting mediastinum
1.3 cm left pleural based nodule
Several <1.0 cm nodules RLL
Multiple tiny RUL nodules

2.1 cm nodule anterior right lobe of liver
7.4 cm mass left of midline anterior abdominal wall
9.2 cm mass right omentum
8.3 cm mass left omentum
8.2 cm infiltrative mass left iliopsoas

Brief trial of Tamoxifen

11 years after original presentation, patient is back on Femara. Completed Cyberknife therapy for enlarging left anterior abdominal mass.
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- Original biopsy right iliac mass (2)
• Radical resection of tumor mass
Uterine leiomyomata are the most common pelvic tumors of the female genital tract. More prevalent in women of African descent than in Caucasian women. Systematic histologic examination of hysterectomy specimens has shown a prevalence of uterine leiomyomata of 77%.

Often asymptomatic, with incidental finding of pulmonary lesions. Most common site of metastasis is the lung. May also involve lymph nodes, heart, skull, spine, and retro peritoneum by hematogenous spread.

BML, **Benign metastasizing leiomyomatosis** is a rare condition usually found in women 35-55 years of age.
Histologically benign smooth muscle cells extend into pelvic veins, and then spread to the lungs, etc.

Series of 105 patients with retroperitoneal leiomyomata from 1941-2007. Over 40% of patients had had a previous hysterectomy for uterine leiomyomata or were found to have concurrent uterine leiomyomata. 25% asymptomatic. 31.3% c/o abdominal fullness. 18.8% had urinary symptoms. 18.8% had weight loss. 18.8% had pelvic pain.

Pathology shows smooth muscle cells without anaplasia and with rare mitotic figures. Tumors are often estrogen and progesterone receptor positive.

Some authors still believe BML are low grade uterine leiomyosarcomas. Criteria for distinguishing benign from malignant smooth muscle tumors in the uterus:
1. Presence of necrosis
2. Mitotic index
3. Cytologic atypia
4. Cellularity
5. Infiltrative tumor border
Clinical course is usually indolent, although recurrence is common. Malignant transformation can occur in even small leiomyomas. (Risk of uterine leiomyoma progressing to uterine leiomyosarcoma < 0.1%.)

Radical surgical resection is treatment of choice, and usually curative in BML.
Hormonal manipulation is often effective.

Chemotherapy is used in symptomatic, nonresectable disease. Doxorubicin and dacarbazine. Studies using Gleevec due to c-Kit (CD117) expression. Gemcitabine and docetaxel in advanced uterine leiomyosarcoma, overall response rate 53%.