Abstract: A 22 year old pregnant woman presented with acute urinary retention at 8 weeks of gestation. Although initial clinical examination and ultrasonogram abdomen pelvis were suggestive of cervical fibroid, MRI abdomen pelvis raised the doubt of possible retroperitoneal mass. As the symptoms worsened with mass increasing in size and patient developing bleeding per vagina, digital evacuation was done under general anaesthesia and trucut biopsy of mass was done which revealed the malignant lesion- fibrosarcoma. So we report this case of retroperitoneal mass with unusual presentation of acute urinary retention in first trimester of pregnancy.

Keyword: 'Urinary retention', 'Cervical fibroid','Retroperitoneal sarcoma',Fibrosarcoma

A 22 year old second gravida with previous full term normal delivery presented at 8 weeks of gestational age with acute urinary retention. She had progressive difficulty in passing urine for two weeks associated with lower abdominal pain & intermittent fever. There was no history of vomiting, bleeding per vaginum, trauma or similar episodes in the past. No history of any co-morbid illness like diabetes mellitus, hypertension, asthma, epilepsy, long term drug intake or previous surgery. She had regular menstrual periods prior to conception. Her last child birth was 2 years back. She delivered a male baby weighing 2.5kgs by labour natural. Her antepartum, intrapartum & postpartum period were uneventful. She had no similar complaints during previous pregnancy or interpregnancy interval.

On examination, she was moderately built, afebrile, not anemic and not icteric, there was no pedal edema. Cardiovascular and respiratory system examination were normal. On examining the abdomen, the bladder was distended and hence was catheterized and about 1300ml of clear urine was drained. There was no difficulty in passing the catheter. Abdomen was palpated again which showed that uterus was enlarged to 14 weeks size& deflected towards right. Per vaginal examination findings were: uterus was deflected to the right & upwards, cervix could not be felt and a hard mass was felt through the posterior fornix & posterior vaginal wall. Per rectal examination was done & a hard mass was felt to the left & posterior to rectum which made us to suspect retroperitoneal tumour. Other possibilities of cervical fibroid or a fibroid impacted in the pouch of Douglas were also considered. Her basic blood investigations were within normal limits except for leukocytosis.

USG- Abdomen & Pelvis was done which reported as follows: Single live intrauterine pregnancy of 7 weeks gestational age. A mixed echogenic mass appearing to arise from the body of the uterus extending downwards & measuring 13.4 X 11.4 cms was also found. There was grade I & grade III hydronephrosis in the right & left kidney respectively. MRI showed single live intrauterine pregnancy of 10 weeks gestational age & a huge solid pelvic mass displacing the uterus superiorly. Bilateral back pressure changes were noted in the kidney. Rectum was pushed posteriorly. Findings of MRI were not in favour of cervical fibroid.

Meanwhile the symptoms worsened and the mass rapidly increased to 20 weeks size from 14 weeks within a period of 3 weeks. Patient developed bleeding per vagina and so she was examined under anaesthesia. The mass was found to arise from left & posterior to rectum pushing the uterus & cervix to the right. Cervix was hitched against the pubic symphysis. Products of conception were in the process of expulsion. External os was reached with great difficulty & digital evacuation with check curettage was done. Trucut biopsy of the mass was also taken. Histopathology report surprisingly revealed high grade spindle cell lesion with aggressive fibromatosiS suggestive of fibrosarcoma.
HISTOPATHOLICAL PICTURE SHOWING AGGRESSIVE FIBROMATOSIS

Oncologist opinion was obtained & patient was started on first cycle of palliative chemotherapy consisting of Vincristine 2mg, Adriamycin 40 mg & Cyclophosphamide 60mg. Unfortunately she succumbed to her disease 2weeks after first cycle of chemotherapy.

Final diagnosis of the case was retroperitoneal sarcoma causing acute urinary retention in first trimester of pregnancy.

DISCUSSION

Acute urine retention constitutes an emergency. It is a rare complication of early pregnancy with few serious sequelae and rapid measures are essential to avoid extremely serious maternal morbidity.

Some of the commonly attributed causes are:
- Pressure or anatomical distortion, usually from utero-vaginal prolapse.
- Pelvic tumors- benign or malignant.
- A retroverted, incarcerated uterus is a rare but well known cause.
- It can occur during labor due to physical pressure or due to epidural.
- A full bladder may obstruct labor and can be damaged by instrumental delivery.
- Drugs like anti muscarinics, anti-depressants& anti-psychotics.
- History of inflammatory disease may trap the fundus of the uterus within scar tissue that also may prevent the enlarging, gravid uterus from ascending into the abdominal cavity.
- And as in our case, rarely it might be caused by a retroperitoneal sarcoma.

RETROPERITONEAL SARCOMA

They are malignant tumors arising from mesenchymal cells, which are usually located in muscle, fat, and connective tissues. Retroperitoneal sarcomas have varying clinical courses depending on their histologic subtype and grade. The rarity of retroperitoneal sarcomas, combined with the vast array of histologic subtypes, has complicated our understanding of these tumors and impeded the development of effective therapies.

Incidence: Retroperitoneal sarcoma is a rare malignancy often insidious in onset. Population estimates in western countries place the yearly incidence at 2.7 cases per million people. The occurrence of cancer in pregnant women is not a common phenomenon. Retroperitoneal sarcomas are rare accounting for only 1%–2% of all solid malignancies & much more uncommon with pregnancy. Of all sarcomas, the majority occur outside of the retro peritoneum. Only 10%–20% of sarcomas are retroperitoneal sarcomas.1 Review of the literature reveals that the most common ages of presentation are in the 5th or 6th decade, with similar distribution among the sexes.

Symptoms: The typical presenting symptom is an abdominal mass, pain, or symptoms related to compression of adjacent abdominal structures. Presentation is often complicated by metastasis or involvement of local structure. Patients with sarcomas present late, because these tumors arise in the large potential spaces of the retro peritoneum and can grow very large without producing symptoms. Moreover, when symptoms do occur, they are nonspecific, such as abdominal pain and fullness, and are easily dismissed as being caused by other less serious processes. Retroperitoneal sarcomas, therefore, are usually very large at the time of presentation.

PATHOLOGY: Two prevailing theories suggest that mesenchymal stem cells are found in local tissue pools or arise from the bone marrow. Approximately half of retroperitoneal sarcomas are high grade tumors. The most commonly encountered histologic subtypes of retroperitoneal sarcoma are liposarcoma (41%), leiomyosarcoma (28%), malignant fibrous histiocytoma (7%), fibrosarcoma (6%), and malignant peripheral nerve sheath tumor (3%).

MANAGEMENT:

- Once a retroperitoneal tumor has been identified, a number of clinical entities must be considered, including functioning and nonfunctioning adrenal tumors, renal tumors, pancreatic tumors, advanced gastrointestinal carcinomas, germ cell tumors, and soft tissue sarcomas.
- As other neoplastic processes, such as lymphoma and metastatic disease, which are treated differently, may mimic retroperitoneal sarcomas, tissue diagnosis is of paramount importance. Therefore, image-guided and surgical biopsies have a relatively greater role to play in the diagnosis of retroperitoneal sarcomas than is the case for sarcomas elsewhere in the body.
- Accurate staging is important as it facilitates determination of appropriate surgery, establishes prognosis, and provides a guide for adjunctive therapy. The staging system takes into consideration histological grade, tumor size and depth relative to the superficial muscular fascia, presence or absence of lymph node involvement, and the presence or absence of distant metastases.
- Difficulty in the management of retroperitoneal sarcomas relates to their large size and the complexity of the retroperitoneal anatomy. Surgery is the standard treatment for retroperitoneal sarcomas. Multimodality treatment is usually favored for retroperitoneal sarcomas due to the inability to obtain negative margin resections and high local recurrence rates.
- Preoperative RT is often preferred, it may render unresectable tumors amenable to resection. Preoperative chemotherapy may have advantages over postoperative chemotherapy. However, the role of adjuvant RT or preoperative chemotherapy vs. postoperative chemotherapy has not yet been evaluated in randomized clinical trials. Generally accepted chemotherapeutic agents include doxorubicin, ifosfamide, epirubicin, gemcitabine, dacarbazine & liposomal doxorubicin.
- Local failure is evident in nearly 90% of patients who die of retroperitoneal sarcomas due to the limitations of adjuvant radiation and chemotherapy.
- Biopsy is recommended before any treatment for a patient with unresectable or metastatic retroperitoneal sarcoma.
Follow-up imaging is usually performed with CT or MRI with the frequency of follow-up being often dictated by the completeness of the tumor resection, tumor type and grade. One suggested follow-up scheme is to obtain imaging at regular intervals (i.e. CT or MRI every 3–4 months for 2 years, then every 4–6 months for 3–5 years, and every 12 months thereafter.

CONCLUSION:
Though retention of urine in early trimester of pregnancy is not uncommon due to the commonly encountered conditions like a retroverted gravid uterus or a fibroid, retroperitoneal sarcoma causing urinary retention in pregnancy is a rare presentation. Paucity of literature regarding retroperitoneal sarcomas with pregnancy reflects the rarity of our case. Although rare, emergency encounters with such masses continue to be the surgeon's nightmare.

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