



TORSION OF NON- GRAVID UTERUS: ACUTE ON CHRONIC PAIN ABDOMEN IN FIBROID UTERUS

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ABSTRACT Torsion of non-gravid uterus is a rare condition. Clinical features are non-specific and the diagnosis is made at laparotomy. A 34 year old nulliparous woman, known case of fibroid uterus with chronic pain abdomen of 2 months duration, experienced sudden pain abdomen and vomiting of 2 days duration and she was provisionally diagnosed as red degeneration and managed conservatively. USG showed right cornual subserous fibroid of 7x7.2 cms with minimal blood flow and another 3.6x3.1 cm posterior wall intramural fibroid. Torsion of subserous fibroid was suspected and she was taken up for surgery. On opening the abdomen, the uterus was torsed at isthmus by 180° in clock wise direction and the large subserous fibroid ≥ 15 cms was in POD. Detortion occurred while exteriorizing the fibroid and there were other multiple fibroids of type 7 to 2. Myomectomy was performed. Histopathology showed leiomyomas with extensive areas of infarction without any atypia.

KEYWORDS : Fibroid uterus, acute on chronic pain, subserosal (FIGO Type 7) fibroid, torsion uterus

Introduction:

Uterine torsion is defined as rotation of the uterus on its long axis of more than 45°. The torsion of uterus in a non gravid state is considered to be very rare. It is reported in both premenarcheal age groups and post menopausal women due to various causes. Only 25 cases of torsion in a non gravid uterus has been reported in last 20 years⁽¹⁾. The diagnosis of uterine torsion is difficult as the symptoms are very vague, but it is crucial to start the appropriate management as this might even be fatal. We present a case of uterine torsion associated with multiple fibroids in a non-gravid nulliparous, young reproductive aged woman.

Case report:

A 34 year old unmarried, physically challenged woman belonging to lower socioeconomic status, fish seller by occupation, was admitted through emergency medical services with a provisional diagnosis of red degeneration of fibroid. She presented with acute exacerbation of pain abdomen with vomiting of two days duration.

The patient was apparently normal 2 months back, when she developed lower abdominal pain which was pricking type, non - radiating, not associated with vomiting, aggravated by driving her tricycle. The pain increased in intensity for one month for which she had consultation in nearby hospital and was diagnosed to have fibroid uterus after performing abdominal USG (Uterus 8.4*4.6 cm, ET - 4mm, Posterior wall fibroid of 2.6*2.4 cm). She was given analgesics for pain relief, but she didn't feel significant reduction of pain. Subsequently she went to two medical colleges and was told to have fibroid uterus and advised hysterectomy but she refused. Her pain suddenly increased with symptoms of vomiting, giddiness for which she sought our emergency services. There was history of loss of appetite and early satiety for two months, but there was no history loss of weight. There was no history of abdominal distension, urinary disturbances and bowel disturbances. There was history of minimal white discharge for one month, not foul smelling, not blood stained and not associated with itching. Her menstrual history revealed she attained menarche at 16 years of age, and her cycles were regular (3/28 days), not associated with pain and clots.

Her past history revealed that she suffered from fever for 2 days at 5 years of age followed by paralysis of lower limbs and was later diagnosed as post - polio residual paralysis. She has been taking treatment in our institution and was advised total hip arthroplasty at 12 years of age and she underwent the same but did not regain the strength of both limbs and they are atrophic. She cannot stand on her own and requires support for her mobility. She was given a mechanical tricycle by Government of Tamil Nadu which can be handled by upper limbs. She is not a known case of diabetes mellitus, hypertension, tuberculosis, ischemic heart disease, thyroid disorder or bronchial asthma.

On examination, she was conscious, afebrile, had tachycardia of 106 beats /min and there was no hypotension. Her cardiovascular and

respiratory systems were normal. Per abdominal examination revealed 18 week size firm tender mass occupying right iliac, right lumbar and hypogastric regions with restricted mobility arising from pelvis. There was no guarding and rigidity or free fluid. There was no other organomegaly. Per vaginal examination was not performed. Provisionally suspected red degeneration of fibroid clinically and she was hospitalized and observed and given intravenous fluids and analgesics overnight. USG done next day by the consultant showed normal size uterus with right cornual sub serous fibroid 7x7.2 cms with minimal vascularity and there were no findings suggestive of degeneration. There was another 3.6x3.1 cms posterior wall intramural fibroid. Suspected as torsion of subserous fibroid and was counselled for surgery and given the option of myomectomy or hysterectomy and consent was taken for the same. Her complete hemogram showed hemoglobin of 11.8gm/dl, Total WBC count - 16,420/mm³, platelets - 180 x10³. Renal function tests, Liver function tests, Serum electrolytes are normal, Fasting Blood sugar / Post Prandial blood Sugars were -99/122 mg/dl. Serology - negative for VDRL, HIV and HbS Ag, ECG - normal sinus rhythm, Chest X-ray PA view was normal.

She was given general anesthesia and abdomen was opened by Pfannenstiel incision thinking of her weak muscles. Uterus was seen drawn up and left round ligament was seen anteriorly across and the fibroid was felt in POD. Up on exteriorizing the uterus with the mass it was realized to be torsed to 180° (Fig 1- posterior surface of uterus) in a clockwise direction (Fig-2- anterior surface of uterus after detortion). The larger fibroid was right cornual and subserous measured 15x18 cms hard, with thick pedicle of 4 cms extending from fundus to posterior surface (Type 7 FIGO). There was no torsion of the pedicle. There were other types of fibroids Viz. Type 6 on anterior wall (fibroid of 3*4 cm on right side just above the round ligament). Type 5 fibroid of 3*3 cm in the posterior wall close to the right fallopian tube. Type 2 fibroid of 4*3cm was present in the posterior wall of body of uterus. Myomectomy was done and bilateral round ligaments were plicated. There was no evidence of Pelvic Inflammatory disease or Endometriosis. Both ovaries and fallopian tubes were normal. Abdomen was closed in layers. There were no post operative complications and she was discharged on 5th post operative day. She came for follow up after 4 weeks and her histopathology was reported as leiomyomas with *extensive areas of ischemic infarction*. No evidence of nuclear atypia or increased mitotic activity.

DISCUSSION:

The position of the uterus is maintained by the uterosacral ligament and the broad ligament⁽²⁾. In a case of sessile fibroid, torsion of uterus occurs along with torsion of fibroid^(2,3). The common site of uterine torsion is at the level of isthmus^(2,3) and this occurred in the present case also. Various causes for torsion of a non gravid uterus has been reported out of which the most common causes include, uterine fibroids in 21%⁽⁴⁾ others include juvenile ovarian tumors, large ovarian cysts and ovarian tumors in adults⁽¹⁾. Predisposing factors for torsion uterus can be mullerian

anomalies like septate uterus and unicornuate uterus in which torsion of non gravid uterus is reported⁽¹⁾. Size of the fibroid can be a predisposing factor, as torsion was reported in fibroids $\geq 13\text{cm}^{(1)}$. A study using MRI proposed poor isthmic healing following a lower segment cesarean section which can alter normal cervical length and result in elongated cervix thus causing weakness and changes in angulation of uterus that can lead to torsion⁽⁵⁾. Pelvic adhesions and pelvic masses can lead to torsion^(6,7). In the current lady, the size of the fibroid ($\geq 15\text{ cms}$) along with its location (posterior right cornuo-fundal) could have predisposed to torsion of uterus in a clock-wise direction as the weight of the fibroid causing forces acting posteriorly.

Torsion of uterus can be either of two types acute or chronic. In acute type patient may present with sudden sharp pain, whereas in case of chronic type, the patient have a history longstanding abdominal discomfort, with both the types having a midline swelling of pelvic origin⁽²⁾. The present woman may have been suffering from chronic type superimposed by acute presentation. The symptoms of torsion uterus can vary from lower abdominal pain, vomiting, bleeding per vagina, palpable abdominal mass, menstrual irregularities like dysmenorrhea, amenorrhea, cyclical pelvic pain, gastrointestinal symptoms and urinary discomfort^(1,2,3). Some studies state that CT and MRI findings can be used for the diagnosis of torsion uterus preoperatively. Torsion can be suspected if the fibroids detected in the previous ultrasound have changed their position⁽⁸⁾. CT signs include "Whirl sign", Whorled structure or twisted cervix⁽⁴⁾. MRI signs include demonstration of X shaped configuration of upper vagina (normal H shaped configuration)⁽⁹⁾. Plain imaging and CT image showing gas in the uterine cavity can also be a sign of torsion⁽⁸⁾. Failure to pass the uterine sound in a women presenting with acute abdominal pain can give a suspicion of uterine torsion⁽²⁾. The differential diagnosis include torsion of the adnexa, torsion of the pedunculated uterine leiomyomas⁽¹⁰⁾. Uterine torsion is a gynecological emergency, so we need to act faster in order to prevent fatal complications like gangrenous uterus and mortality⁽⁸⁾. Treatment modalities can be fertility preservation surgeries which can be performed depending on the reproductive status of the patient which include myomectomy and restoration of anatomical position of the uterus by detorsion^(3,10). Further, bilateral plication of the round ligaments as in our case, bilateral plication of the uterosacral ligament to prevent the recurrence. In women who completed family or if the uterus enters into irreversible gangrenous phase, hysterectomy can be considered^(3,10).

CONCLUSION:

Torsion of the non-gravid uterus is an extremely rare condition and the diagnosis of this condition preoperatively is very difficult as the symptoms are non-specific. Any delay in the diagnosis can lead to fatal complications and gangrene of this vital organ. Therefore the treating gynecologist should consider uterine torsion as a differential diagnosis in a patient presenting with acute abdominal pain.

Figure Legends



Figure1: Shows the torsion of uterus with fibroid uterus to 180°



Figure 2: Shows uterus with fibroid after detorsion

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