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Gigantic uterine mass in a young girl- case report

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ABSTRACT
Although uterine leiomyomas are the most common neoplasms of the female genital tract, this is not the case when referring to women under the age of 19. Only a few cases of uterus leiomyomas have been reported in this age.
Preoperative imaging evaluation is mandatory in adolescent women for the accurate detection, localization, and characterization of uterus leiomyomas.
We report a case of a 15-year-old girl admitted to our hospital for irregular menses,constipation, and abdominal distention. The patient underwent MR examination of the pelvis. Both imaging modalities revealed uterine enlargement and the presence of innumerable variably sized leiomyomas. Histopathologic examination following exploratory laparotomy confirmed the presence of uterus leiomyomas. The patient underwentopen myomectomy, following MR examination of the pelvis.

I. INTRODUCTION

Leiomyomas, also known as fibroids, fibromyomas or fibromas represent the most common uterine neoplasm of female genital tract, occuring 20-30% of women between the ages of 35 and 50 years.the overall incidence is between 4% to 11%, this percentage rises to 35% during the reproductive age and to 40% in women over 50 years old.

Many risk factors are associated with the development of leiomyomas, such as early menarche, obesity and nulliparity with exposure to sex steriod hormones, espically estrogen.
However the benign tumors are extremely rare in women under the age of 19 years and the biological behaviour of such leiomyomas is unknown.

An accurate detection, characterization and localisation of uterine leiomyomas are important in these patients. Mri imaging is considered the examination of choice for detection and localisation of uterus fibroids.
We present a case of 15 year old girl with fibromatous uterus, evaluated with mr imaging examination.

II. CASE REPORT

A 15 – year old female patient came to the opd with complaints of irregular menses, spotting per vaginum,perception of development of gradual mass in the abdomen with easy satiety and constipation off and on since 5 months.her family, past medical and surgical history was unremarkable. Menarche occurred at 13 years of age ;she had irregular and heavy menstrual periods, lasting upto 6 days; the patient had no dysmennorhea. The patient had never used the oral contraceptive pill or other hormonal therapies. Abdominal examination revealed a large mass, tense ,irreular margins arising from pelvis uptoepigastric region. A vaginal examination was not performed because the patient was a virgin. Rectal examination confirmed the presence of a large , irregular mass with tense elastic consistency, which seemed to originate from anterior uterine wall.

Hematological and biochemical parameters were normal.
There was no sign of systemic infection (temperature 37 degree celcius ; white blood cells – 6900; pcr and esr – negative)
Tumor markers
(ca 19.9 bhcg,alpha fetoprotein lhd were normal)
Ca 125 was however raised – 146.60.
Abdominal ultrasound revealed a large solid extending utp epigastrium of 285mm x 139mm x 221mm and 4.5 kgs of weight approximately; arising from the fundus of uterus with broad based pedicle ;lipoleiomyosarcoma.
Magnetic resonance imaging(mri) showed a large pedunculated fibroid from anterior uterine wall, filling entire pelvis and abdomen , reaching upto inferior surface of liver, 2 other solid enhancing lesions seen in lower abdomen anterior to uterus, inferior to above mentioned larger mass, possibility of leiomyosarcoma cannot be excluded.

On the basis of the imagining findings,

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surgery was judged to be required. Surgery was performed on admission to the hospital. A midline incision was given from suprapubic region to epigastricregion.the uterus had increased volume because of the presence of large mass in the anterior fundal wall. Mass of 30 x 18cms appoximately was present. Enveloped by omental adhesions. Postphlogistic adhesions were present between omentum and colon on the upper margin and fundus of uterus in the lower margin.

Increased vascularity and blood vessels stretched over the mass was seen. Mass excised in toto after ligating feeder blood vessels. Peduncle over fundus of uterus ,vasopressin instilled and careful dissection and excision of mass done. Fundus masculature and capsule refashioned with no 1 vicrylinterupped and baseball sutures taken to secure haemostasis .the post operative period was uneventful.

At pathological examination, the mass appeared as a typical myoma. It weighed 4 kgs and was covered by fibrous pseudocapsule beneath which thin venous net was present. On cut section , the mass had a fasciculated appearance with red color and soft consistency.
There were hemorrhagic and necrotic areas.
Microscopic examination revealed a leiomyoma.

III. RESULTS

At follow up , the patient reported heavy vaginal bleeding at the first menstrual period after surgery followed by irregular menses the next cycle. Further cycles were regular and painless.ultrasound was performed at 3 months from surgery demonstrated an average size uterus with no recurrence of myoma. Stitch line was healthy and patient was symptomatically better.

IV. CONCLUSION

Uterine leiomyomas should be considered in adolesecent women presenting with a pelvic mass and abdominal pain. The management of the leiyomyomas in this age group should be conservative, with the goal of preserving fertility.
Accurate evaluation of aetilogy of these tumors is important for further councelling.

V. DISCUSSION

Leiomyomas of the uterus in women under 20 years of age are rare and occur much less often than adnexal lesions. Although ultrasound studies are usually sufficient to make the distinction between the 2, mri generally is superior to sonography in this regard. In this young population, myomectomy is the surgical procedureof choice to preserve fertility.

At presentation, uterine myomas may be asymptomatic (30%–80% of cases), but abdominal and back pain, compression symptoms, and vaginal bleeding with anemia are frequently present at diagnosis. Fields and neinstein compared the first clinical presentation of uterine myomas in adolescents with the presenting symptoms in the adults. They observed that, in adolescents, 30% of myomas are asymptomatic (50%–80% in the adults), 50% cause menstrual abnormalities (30% in adults), and urinary abnormality is less frequent than in adults (5% in adolescents versus 20% in adults). In their series of 10 patients younger than 21 years of age, 40% of the patients also had symptom of compression and 20% had back pain.

The patient in the current report required surgery because of irregular menstrual cycles, increasing abdominal size and constipation . Obviously other conditions may cause these symptoms such as hemorrhagic corpus luteum, adnexal torsion, and ectopic pregnancy. However, our patient was a virgin and previous radiological imaging suggested the diagnosis of uterine myoma. The preoperative workup is particularly relevant in adolescents because fertility sparing and low surgical injury are mandatory in this population. Clinical examination, abdomino-pelvic ultrasound, computed tomography (CT), and MRIare commonly used in the differential diagnosis of pelvic masses and uterine myomas. Obviously, ultrasound is the first-line imaging technique used to evaluate a pelvic mass because of its availability and safeness. The second-line imaging techniques are CT and MRI, the latter being the most effective technique to evaluate uterine myomas.

Leiomyomas in the young population often show histologic features favouring the diagnosis of malignancy; half of the reported cases demonstrated increased cellularity, mitotic activity, and cellular atypia. These pathologic characteristics were not met in our patient.

Uterine leiomyomas, although rare they should be considered in adolescent women presenting with a pelvic mass and abdominal pain, as in this case, or menstrual disorders and abnormal uterine bleeding. The management of leiomyomas in this age should be conservative for the preservation of fertility. Therefore, the preoperative characterization of the nature of these tumors is extremely important. The diagnosis should be based on imaging findings, that is, sonographic and magnetic resonance imaging features.

When myomas are typical with no sign of degeneration, they appear at MRI as homogeneous and they have hypointense signal. However, myomas may have a variety of degenerations

(myxoid, hyaline, hemorrhagic, cystic, fatty, calcified) and degenerated myomas have heterogeneous signal intensity on MRI. In the presence of rapid growth of the mass, signs of degeneration on MRI, free fluid in the pouch of douglas or ascites, a differential diagnosis with malignancies (such as leiomyosarcoma) should not be neglected. MRI has a specificity, sensitivity, positive predictive value, negative predictive value, and diagnostic accuracy of 93.1%, 100%, 52.6%, 100%, and 93.1%, respectively, in differentiating benign myomas from uterine sarcomas; these values increase to 93.8%, 100%, 83.3%, 100%, and 95.2% with dynamic mri alone, and 100%, 100%, 100%, 100% and 100% with combined use of ldh and mri.24 another study suggested that the combined use of t2-weighted and diffusion-weighted mri for the differentiation of uterine sarcomas and benign myomas allows a specificity and sensitivity of 100% to be obtained. in the current patient, mri demonstrated a homogeneous mass without signs of degeneration, confirming the suspicion of benign uterine myoma, and it was decided that more advanced imaging techniques were not required. The myomectomy was performed by laparotomy because of the mass size; in addition, our patient was a virgin, thus preventing the use of a uterine manipulator during laparoscopic myomectomy. Only an accurate pathological examination of the mass, including immunohistochemistry, allows a differential diagnosis between benign myomas and low-grade sarcomas. Increased cellularity, nuclear atypia, and increased mitotic activity are features that can be found in an adolescent population and suggest the need to carefully evaluate the tumor to exclude malignancy or malignant transformation. Other common features that should be carefully examined are tumor cell necrosis, atypical mitotic figures, infiltrative borders and, in a minority of cases, vascular invasion. Immunohistochemistry (positivity for smooth-muscle markers such as desmin and h-caldesmon) may facilitate the diagnosis of poorly differentiated tumors. the rapid growth and uncommon large size of uterine myomas, as in this report, may also be associated with malignant transformation. however, up to now, no case of uterine leiomyosarcoma has been reported in adolescents and they are very rare under the age of 19 years.

The management of myomas can be conservative, medical or surgical. If myomas are small and asymptomatic or well controlled with hormone therapy, observation can be enough. Surgical treatment is necessary if symptoms are present and evolve or if the mass has a rapid growth. Myomectomy must be the first choice because preservation of fertility is the main factor for the adolescent population.

The follow-up of these young patients is another important element that should be carefully considered. In our case, at 3 months follow-up no recurrence was diagnosed. A recent report demonstrates that, even if it is extremely rare, recurrence after surgery is possible and should not be ignored.

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