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Case Report

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Huge Uterine Leiomyoma Causing No Menstrual Irregularities

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Introduction

Leiomyoma are the most common benign tumors of the genital organs in women of childbearing age, causing significant morbidity and impairing their quality of life [1].

The frequency of the condition is, however, likely to be underestimated because in many women it is asymptomatic, or symptoms develop insidiously, and therefore remains undiagnosed [2]. The unknown extent and impact of undetected leiomyomas bias the epidemiological data and evidence on associated factors to reflect severe disease [3].

In 1909, the first case of uterine leiomyoma with ascites and hydrothorax was mentioned by Kelly, et al. [4] and then Meigs reported that Meigs syndrome is characterized by the presence of benign solid ovarian tumors like fibroma associated with ascites and pleural effusion [5]. Other pelvic tumors such as teratoma, uterine myoma than fibroma associated with ascites and pleural effusion was reported as pseudo-Meigs syndrome [6].

The leiomyomas originate from the smooth muscle cells of uterine wall. Its size varies from microscopic to giant and they can be submucosal, intramural, or subserous in location. Huge uterine leiomyomas are exceedingly rare [7].

The complaints of leiomyomas are usually menstrual disturbances, pelvic pain, constipation, micturition problem, or some effects on fertility such as miscarriage and preterm labor. The diagnosis of fibroids is made with ultrasound or MRI with a good accuracy [8].

Presently, the following options exist for effective leiomyoma treatment, starting from the most conservative approach to the most invasive approach: symptomatic treatment with oral contraceptive pills or levonorgestrel-releasing IUDs, myoma embolization, surgical myomectomy (hysteroscopic, laparoscopic, open), and hysterectomy. Different factors will affect the patient's choice: personal preference, age, desire for childbearing and future fertility, individual symptoms, and local medical availability of different treatment approaches [9].

Case Summery

Forty-six years old Asian, married but nulligravid woman. She was complaining from long standing big abdominal mass associated with abdominal discomfort, dyspepsia, urinary frequency, constipation and primary infertility for twenty years. She had no menstrual irregularities but have recurrent dysmenorrhea that usually interfered with her work. She used to have symptomatic treatments for her complaints. She reported to be sexually active for the last 20 years but with no conception. She is not smoking or drinking alcohol. She presented herself requesting removal of the mass and the uterus.

Examination

Her general examination was unremarkable, with normal pulse, temperature, blood pressure and respiratory rate. Her abdominal examination revealed a huge pelvi-abdominal mass with smooth outer surface, not tender and reaching up to the xiphisternum. Examination of other systems revealed unremarkable findings.

Investigations

Hemoglobin = 15.1 gm/dl, Red Blood Cell Count =4.76 m/ul, Hematocit = 44%, Mean Corpuscular Volume = 91 fl, Platelets count =218 k/ul, white cell count =4.60 k/ul, serum sodium =144 mmol/l, serum potassium =3.8 mmol/l, serum amylase =74 u/l., serum creatinine = 0.64 mg/dl. Serum CA 125 = 25 u/ml, Ca 15-3 = 18.7 u/ml and Ca 19-9 = < 2 u/ml. Ultrasound examination of the abdomen and pelvis revealed a big pelvi-abdominal mass measuring 23 X 20 x 17 cm. Normal appearance of the liver, spleen, both kidneys and gall bladder. Difficult to visualize pelvic organs. Difficult to visualize midline structures (Figure 1). Magnetic Resonance Imaging (MRI) of abdomen and pelvis revealed a huge pelvi-abdominal well-defined mass measuring 23x21x15 cm occupying most of pelvi-abdominal region, mildly enhanced after IV contrast. It looks heterogeneous and it is inseparable from uterine fundus (uterine myoma should be considered). The lesion is rested anterior to lumber vertebrae with no any erosion or destruction

and it do mass effect on the surrounding structures. Both ovaries are hardly seen from the mass. Otherwise, it is unremarkable study (Figures 2-4).

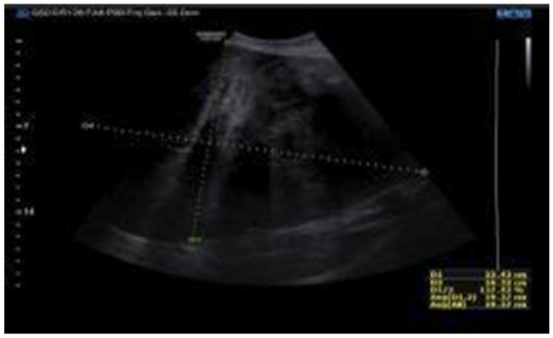

Figure 1: Magnetic Resonance Imaging (MRI) of abdomen and pelvis.

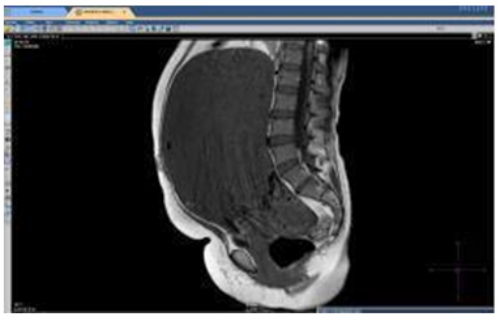

Figure 2: Magnetic Resonance Imaging (MRI) of abdomen and pelvis

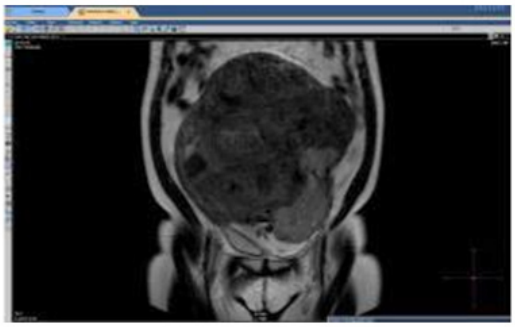

Figure 3: Magnetic Resonance Imaging (MRI) of abdomen and pelvis.

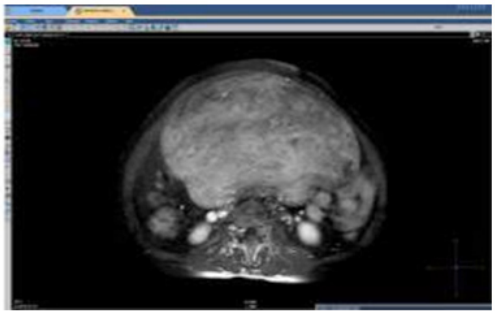

Figure 4: Magnetic Resonance Imaging (MRI) of abdomen and pelvis.

Operative remakes

Under Spinal anesthesia and after abdominal preparation, the abdomen was opened by midline sub-umbilical incision which was extended later around and above the umbilicus by about 5 cm to allow delivery of the huge mass. The mass was surrounded by extensive adhesions to all the surrounding structures. Dissection of the mass from the surrounding structures was done cautiously and safely. The mass was found to be a huge myoma attached to the anterior aspect of the uterus (Figures 5,6). Removal of the mass together with total abdominal Hysterectomy was done. Two tube drains were inserted to drain the abdomen and pelvis postoperatively. The abdomen was closed in layers and subcuticular stitches for the skin. The specimen was sent to the laboratory for histopathological examination which revealed a benign finding. The postoperative period of the patient was uneventful and she was discharged on the third postoperative day in a good condition.

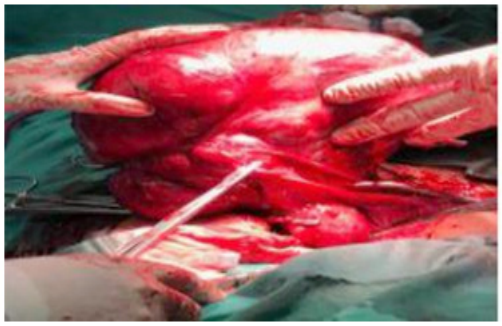

Figure 5: Removal of the mass together with total abdominal Hysterectomy.

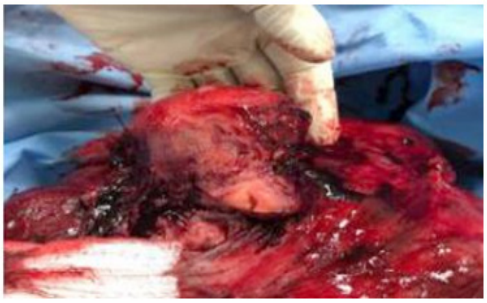

Figure 6: Removal of the mass together with total abdominal Hysterectomy.

Discussion

Uterine leiomyoma (also called fibroid and myoma) are benign growths that represent the most common neoplasms of the uterus, affecting 20% to 30% of women between the ages of 30 and 50 years [10]. Leiomyomas are known to grow in response to both estrogen and progesterone stimulation, and their prevalence increases throughout the reproductive years and is markedly

reduced after menopause. Higher concentrations of estrogen and progesterone receptors, as well as aromatase, have been observed in leiomyomass compared to normal myometrial tissue. [11,12]. Early menarche, exposure to exogenous estrogen, obesity, and pregnancy usually influence myoma growth [10].

A genetic component of the pathogenesis of uterine leiomyomas has also been suggested. High-frequency mutations involving chromosomes 6, 7, 12, and 14 have been reported in uterine leiomyomas [13,14]. It is not known, however, how these mutations initiate the cascade of events that eventually leads to the formation of a leiomyomas. Some theorists suggest that intrinsic myometrial anomalies and endometrial injury play important roles. This is a plausible explanation of leiomyomas formation among menstruating women, but it falls short of explaining why some lesions appear sooner rather than later in adult life [15,16]. It is possible that these lesions are congenitally acquired and exist at early childhood only to develop as a result of sex steroid stimulation after menarche [17]. Interestingly, a higher incidence of leiomyomas have been observed among African women, in whom uterine leiomyomas also tend to occur at a younger age, with increased size, and are more frequently associated with symptoms [18,19]. There is evidence that the expression of abnormal genes accounts for increased severity of symptoms related to uterine leiomyomas among African women when compared to white women [20].

The clinical presentation of symptomatic uterine leiomyomas may include irregular uterine bleeding, pelvic pain, and pressure symptoms, such as urinary frequency or urgency. Our patient presented with a pelvic mass without any abnormal uterine bleeding, which explains the normal hemoglobin level on admission. Physicians should be aware of pelvic tumors, such as müllerian adenocarcinomas and sarcoma botryoides, which present as pelvic masses [15].

The initial step in evaluating a woman with a pelvic mass is pelvic examination. If leiomyomas is suspected, the initial diagnostic adjunct should be ultrasonography, owing to its diagnostic accuracy, cost-effectiveness, and wide availability. Magnetic Resonance Imaging (MRI) represents the gold standard for the evaluation of pelvic soft tissue tumors; however, the technology is not widely available in low resource settings. Computed Tomography (CT) scanning is not recommended for the evaluation of uterine leiomyomas [21].

The treatment algorithm for uterine leiomyomas depends on the patient's age, tumor size and symptomatology. Asymptomatic leiomyomas can be kept under observation, with regular evaluation to eliminate the possibility of malignant transformation [22]. There are no treatment guidelines for symptomatic leiomyomas. Surgical treatments such as myomectomy, myolysis, and hysterectomy can be employed when appropriate. Myomectomy is a common procedure performed for young women with symptomatic leiomyomas; it preserves fertility, does not interfere with the hormonal milieu of the developing adolescent, and is associated with a low recurrence rate [16]. Myomectomy can be performed by laparotomy, laparoscopy, or hysteroscopy, depending on the number, size, and location of the leiomyomas. Hysterectomy is often performed for women with symptomatic leiomyomas who do not desire to retain fertility [22].

Medical management is only used for short-term therapy or as a preparation for surgery because of the significant risks associated with long-term treatment. Gonadotropin-Releasing Hormone (GnRH) agonists, Selective Oestrogen Receptor Modulators (SORMs), antiprogestins (RU486), and aromatase inhibitors have all been utilized with variable degrees of success [23].

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