CASE REPORT

Multiple Uterine Fibroids in an Young Adult

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ABSTRACT

Uterine leiomyoma's are noncancerous growths of the uterus[1] and represent the most common benign tumors of the female reproductive tract. Fibroids affect 20-50% of women of reproductive age, while its presence in the adolescent population has not been well documented. The etiology of uterine fibroids is unclear; however, their growth is regulated by ovarian steroids, and growth factors. Multiple uterine leiomyoma's represents a great challenge for diagnosis and therapy. Several new therapies show promise, but are still at the experimental stage.[2] This report illustrates the case of a 22 year old woman presenting to the gynecology department with an 8-month history of progressively increasing abdominal size associated with pain. There was no history of nausea, vomiting, weight loss, loss of appetite or menstrual irregularities. Physical examination and ultrasound pelvis suggested multiple enlarged uterine fibroids. A myomectomy was performed and multiple fibroids were resected weighing 4.5kg. The patient's postoperative evolution was uneventful and she was discharged from the hospital on the fourth postoperative day.

KEY WORDS: *Multiple Uterine Leiomyoma's, Myomectomy, Ovarian Steroids.*

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INTRODUCTION

Uterine fibroids are the most common tumor of the female reproductive tract that occur in approximately 25% of women of reproductive age. They are frequently asymptomatic but when they do cause symptoms they typically relate to menstrual problems, sub-fertility, or symptoms associated with the size of fibroids like constipation or urinary problems. The average growth rate of fibroids is about 0.5cm/year in diameter but the growth of 3cm/year or greater has also been observed.[3] They can be sub mucosal, intramural or sub serous in location. Large uterine fibroids can cause pain, constipation, increased frequency of micturition and heavy menstrual bleeding. Diagnosis of fibroid is made with fair accuracy by either ultrasound or magnetic resonance imaging (MRI). The latter is particularly suitable for large fibroids and allowing for the number to be determined more easily than through an ultrasound. However, ultrasound particularly with modern equipment is very accurate for those with fibroids below 10cm in size. The asymptomatic tumors can be left untreated as long as they are monitored closely as the malignancy is very unusual.[4]

The traditional treatment is hysterectomy for those who have completed their childbearing and myomectomy for those who wish to retain the uterus. Recent developments in the treatment of uterine fibroids include medical treatment with progesterone receptor modulators and surgery. These surgical procedures include uterine artery embolization, high intensity focused ultrasound, ligation of uterine arteries, and MRI guided laser ablation. The size and numbers of fibroids are an important factor determining which option to use.

Myomectomy is still the surgical procedure of choice for multiple enlarged fibroids. Recent literature suggests that with improved access to blood transfusion and the widespread use of prophylactic antibiotics, morbidity and length of hospital stay following abdominal myomectomy is comparable to abdominal hysterectomy.[5]

CASE

A 22 year old unmarried girl presented to the gynecology outpatient clinic with gradual distention of abdomen since last 8 months and mild abdominal pain. There was no history of nausea, vomiting, weight loss or loss of appetite. There was no history of bowel or bladder problems. Her menarche aged 13 years and with no history of menstrual problems. The girl was unmarried and denied any sexual activity or hormonal intake. Past, family and surgical history were non-significant. She belonged to a small city in Sindh and was misdiagnosed as having a pregnancy or ovarian tumor by different local doctors of her city.

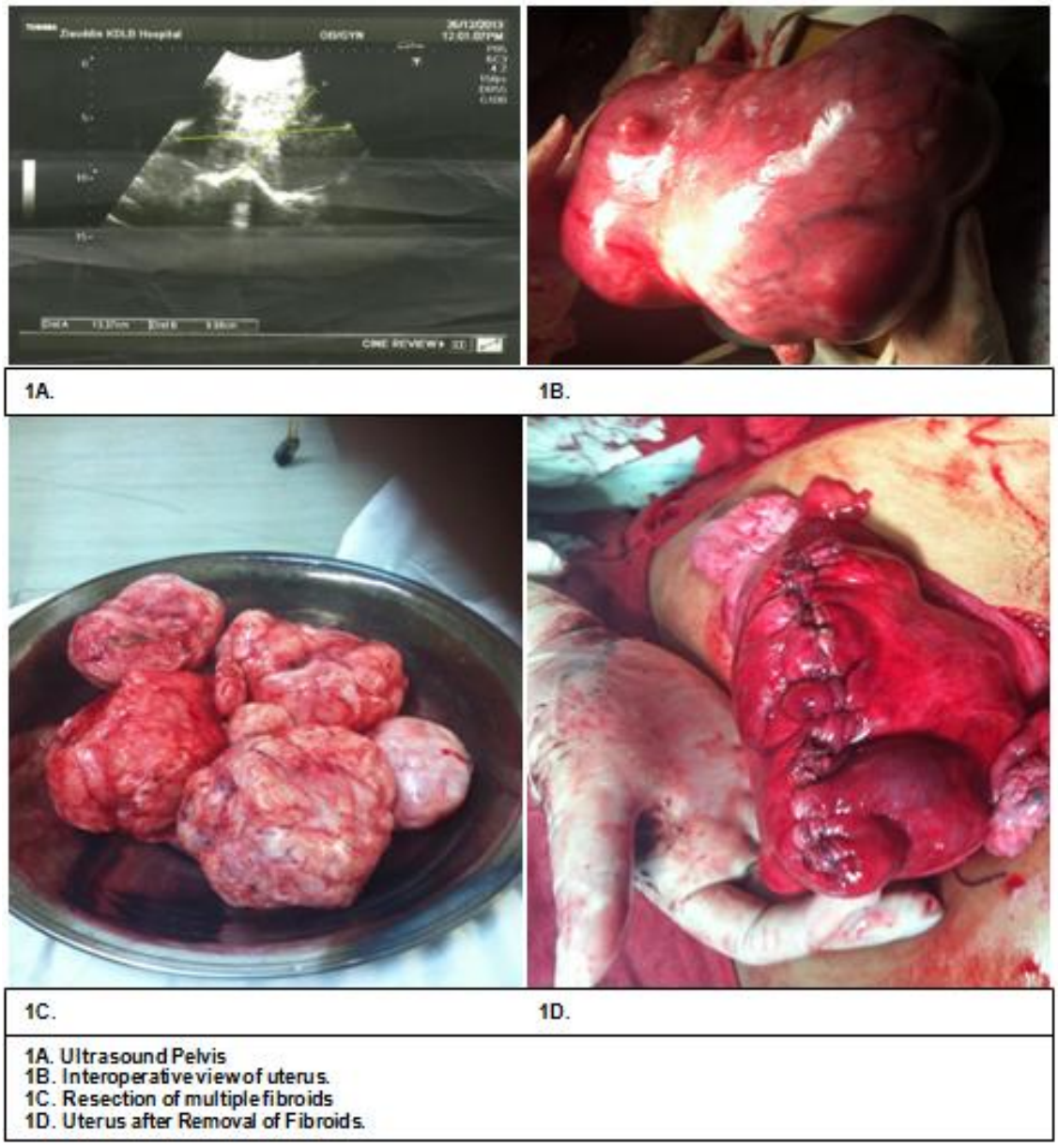
On examination she was of average height and weight. She was confused and depressed because of fear of malignancy. On abdominal examination there was a firm mass arising from pelvis reaching up to the epigastrium, corresponding to symphysis fundal height of 34 weeks gestation. The mass was firm irregular and non-tender, not moving sideways. External genitalia were normal on inspection with no vaginal examination.

Baseline blood investigations were carried out and were normal in range. Ultrasonography (USG) abdomen showed mild hydronephrosis of the right kidney with proximal hydroureter. The left kidney showed moderate hydronephrosis with proximal hydroureter. No lesions were seen in the liver, gallbladder, spleen and urinary bladder. USG pelvis showed an enlarged and bulky uterus reaching up to the epigastrium. Multiple large fibroids were seen involving the whole uterine body, the largest ones seen in the fundus measuring 13.8 x 10.4cm (Figure 1) and in the lower uterine segment posterior wall measuring 10.8 x 10.3cm. Both ovaries were not visualized due to the enlarged bulky uterus. The patient's attendants were counselled about the diagnosis of uterine fibroids and a myomectomy was planned after proper counselling and written informed consent.

Operative findings revealed an enlarged and irregular uterus of about 34 week's size (Figure 2) with no ascites or adhesions in abdomen. There were multiple fibroids arising from anterior as well as posterior walls of uterus ranging from 16x14cms to 6x6cms (Figure 3). Twenty two fibroids were removed from uterus through transverse incisions in posterior and anterior wall of the uterus. All were intramural fibroids. The incision on uterus were closed in two layers after proper hemostasis was achieved. The ovaries and fallopian tubes were normal looking

while uterine size was reduced to about 14 weeks size after the procedure (Figure 4). A drain was placed in abdomen and abdomen was closed in layers. The estimated blood loss was about 1000mls and she was transfused 2 units of blood in the postoperative period, which was otherwise uneventful. She was discharged on fourth postoperative day. The subsequent histopathological report showed fibroids as benign leiomyoma's. Patient went back to her city, satisfied and relieved, after two weeks.

Figure 1: Removal of the Lodged Projectile from Nasal Cavity



DISCUSSION

Uterine fibroids are the most common benign tumors that develop in the muscular wall of the uterus,[6] they affect 20-50% of women of reproductive age.[7] Patients with multiple fibroids had significantly more abnormal uterine bleeding. In recent years, scientific research has brought new insights on uterine leiomyoma biology. The development of fibroids has been

shown to be dependent on sex steroids, especially progesterone[8,9] and many leiomyoma-related growth factors have been identified. These include epidermal growth factor, platelet-derived growth factor, transforming growth factor beta, insulin-like growth factor, activin, and myostatin. It is speculated that in patients with multiple fibroids and menstrual disorders, each fibroid can produce different kinds of growth factors or other biological mediators that may have additive negative effects on the myometrium and endometrial environment. Null parity, hereditary, black race, obesity, polycystic ovary syndrome, hypertension and diabetes mellitus are associated with increased risk of uterine fibroids.[10] If uterine leiomyoma is suspected, the initial step is a pelvic examination, but myomas are difficult to palpate unless they are very large. The preferred imaging modality for the initial evaluation is ultrasonography because it is the least invasive and the most cost-effective investigation. CT scans is also useful, but present leiomyomas as indistinguishable from healthy myometrium unless they are calcified or necrotic. MRI defines the anatomy of the uterus and ovaries, but availability and high cost are serious limitations.[11]

It is recommended that the treatment for leiomyomas should be individualized, as both the symptoms severity and the patient's desire to preserve fertility are important factors in determining what type of treatment should be performed. Asymptomatic fibroids must be kept under observation; but rarely uterine leiomyoma's may suffer a sarcomatous degeneration. Uterine artery embolization produces infarction of myomas with low incidence of adverse effects. Medical management (Gn-RH agonists) is efficient for small myomas and in preoperative treatment to decrease tumors volume and blood loss before myolysis, myomectomy and hysterectomy. However, it is costly with significant risk of recurrence. Surgical treatments includes hysterectomy, myomectomy, and myolysis. Laparoscopic myolysis is associated with minimal blood loss and rapid recovery time but with risk of recurrence. Myomectomy preserves fertility but with increased recurrence risk and perioperative morbidity.

Accurate diagnosis and the appropriate therapeutic management of the giant abdominopelvic uterine tumors remain as the main problems associated with the condition. In the discussed case, perioperative and postoperative possible complications (hemorrhage, injury to bowel and urinary tract, infections, hematomas) were avoided using adequate surgical management and carefully perioperative care

REFERENCES

[1] Karim T. A case of giant fibroid uterus in a adolescent girl. Calicut Medical Journal. 2009; 7(4):e6.

[2] Van Voorhis B. A 41-year-old woman with menorrhagia, anemia, and fibroids: review of treatment of uterine fibroids. JAMA. 2009; 301:82-93.

[3] DeWaay DJ, Syrop CH, Nygaard IE, Davis WA, Van Voorhis BJ. Natural history of uterine polyps and leiomyomata. Obstet Gynecol. 2002; 100(1):3-7.

[4] Lumsden MA, Modern management of fibroids. Obstetrics, Gynaecology and Reproductive Medicine 2013;23(3):65-70.

[5] Sawin SW, Pilevsky ND, Berlin JA, Barnhart KT. Comparability of perioperative morbidity between abdominal myomectomy and hysterectomy for women with uterine leiomyomas. Am J Obstet Gynecol. 2000; 183:1448-1455.

[6] Goodwin SC, Spicer JB, Worthington-Kirsch R. Uterine artery embolization for treatment of leiomyomata: long term outcomes from the fibroids registry. Obstet Gynaecol. 2008; 111(1): 22-33.

[7] Verkauf BS. Myomectomy for fertility enhancement and preservation. Fertil Steril. 1992; 58:1-15.

[8] Schweppe KW. Long-term use of progestogens – effects on endometriosis, adenomyosis and myomas. *Gynecol Endocrinol.* 2007; 23 Suppl 1:17-21.

[9] Maruo T, Ohara N, Yoshida S, et al. Lessons learned from the preclinical drug discovery of asoprisnil and ulipristal for non-surgical treatment of uterine leiomyomas. Expert Opin Drug Discov. 2011; 6:897–911.

[10] Okolo s. Incidence, aetiology and epidemiology of uterine fibroids. Best Pract Res Clin Obstet Gynaecol. 2008; 22(4):571-588.

[11] Hoffman B. Pelvic mass. In: Schorge J, et al editors. Williams Gynecology, Chapter 9. Ed. McGraw-Hill Companies; 2008. p.197-224.