ABSTRACT

Uterine leiomyomas are common uterine tumors and often altered by degenerative changes, which can cause difficulty and confusion in their clinical diagnosis. Several agents exist for the medical management of uterine fibroids through symptom control, reduction in fibroid volume, and reduction in menstrual blood loss. In our patient, Tab. mifepristone 25 mg was used for 9 months. In follow-up, size of fibroid tripled over 9 months. Patient started developing pressure symptoms. Surgery was difficult to perform because of cystic degeneration. Further long-term study is needed to exactly understand the long-term effect of these medicines.

Keywords: Cystic degeneration, Leiomyoma, Mifepristone.

CASE REPORT

Recently, we had a case of huge fibroid uterus with cystic degeneration. A 33-year-old premenopausal nulliparous lady married since 1 year, came to our outpatient department with sonography findings of big fibroid uterus. It was first noticed by her husband around 10 months earlier as a lump in her lower abdomen. Sonography was done. It was diagnosed to have fibroid uterus about 6 cm in size. She consulted a local gynecologist. She was prescribed Tab. mifepristone 25 mg daily for 9 months. She had regular follow-up with sonography. She left her medication 1 month ago. During her medication, she had amenorrhea for 6 months. Now, she presented to us with complains of heavy bleeding per vaginum, constipation, and increased frequency of urination for 1 month. She also noticed increasing size of mass per abdomen. There was no history of severe pain abdomen. Her recent sonography showed a well-defined fibroid of 22 cm size arising from anterior wall of uterus with irregular internal cystic changes suggestive of cystic degeneration. On clinical examination, her vital signs were unremarkable. Per abdomen examination showed a mass occupying whole lower abdomen reaching up to 28 weeks size uterus (Fig. 1). It was firm in consistency, smooth surface, and nontender. Her blood and urine investigations were normal. After complete workup, we planned to do laparoscopic myomectomy. On insertion of laparoscope, uterus was uniformly enlarged about 26 to 28 weeks in size, reaching above aortic bifurcation. Adnexa were normal (Fig. 2). No ascitic fluid was noted. We usually inject Pitressin before myomectomy. When we put the laparoscopic needle to inject vasopressin, about 500 mL of yellow colors clear fluid came out through myoma. As soon as incision was done, soft cystic yellow jelly-like pulpaceous myoma
popped out. There was complete obliteration of myoma plane. It was very difficult to handle the pulpaceous myoma and to ensure that all was removed as the proper plane cleavage was totally lost (Figs 3 and 4). It was a really tedious task to handle and to remove in totality. Myoma bed was sutured in layers (Fig. 5). Specimen sent for histopathology showed fibroid uterus with cystic degeneration.

DISCUSSION

Myomas are remarkably common. Fine serial sectioning of uteri from 100 consecutive women who underwent hysterectomy found myomas in 77%, including some as small as 2 mm.2 A random sampling of women aged 35 to 49 who were screened by self-report, medical record review, and sonography found that by age 35 the incidence of myomas was 60% among African-American women; the incidence increased to over 80% by age 50. Caucasian women have an incidence of 40% by age 35, and almost 70% by age 50.3

Myomas are benign, monoclonal tumors of the smooth muscle cells of the myometrium. They are composed of large amounts of extracellular matrix containing collagen, fibronectin, and proteoglycan. Collagen type I and type III are abundant, but the collagen fibrils are
formed abnormally and are in disarray, much like the collagen found in keloid formation.4,5

Degeneration of uterine leiomyomas occurs when they enlarge and outgrow their blood supply. This is seen more commonly in pregnant women or women who are taking oral contraceptive pills.6 Degenerative or secondary changes are detectable in approximately 65% of uterine leiomyomas: Hyaline degeneration (63%), myxoid changes (19%), calcification (8%), cystic changes (4%), fatty metamorphosis (3%), and red degeneration (3%).7 Hydroptic degeneration characterized by the intra­tumoral accumulation of edematous fluid is also known as degeneration of uterine leiomyomas.7

The diagnosis of degenerating uterine leiomyoma in nonpregnant women is often difficult. The inflammation in the case of degeneration can cause abdominal tenderness, localized rebound tenderness on palpation, elevation of temperature, and leukocytosis.8 On rare occasions, a degenerating leiomyoma can rupture and result in intraabdominal bleeding.9 Preoperative diagnosis of degenerative leiomyomas is often difficult and commonly misinterpreted as complex adnexal cysts of ovarian origin.10 However, in our case, none of the above typical presentation was there. So authors assume that mifepristone may be the reason of cystic degeneration of fibroid in this case.

Mifepristone (RU 486) is a progesterone receptor modulator with primarily antagonistic properties. It binds strongly to endometrial progesterone receptors, minimally to estrogen receptors, and upregulates androgen receptors.11 In a placebo-controlled trial, low-dose mifepristone (RU 486) has been shown to decrease myoma size as well as symptoms.12 Reduction in size with mifepristone might be due to the direct effect in reducing number of progesterone receptors. Besides, because of ovarian acyclicity seen with mifepristone, hormonal milieu similar to early follicular phase may also inhibit steroid-dependent growth of myoma. Increase in androgen receptors also contributes to antiproliferative effects.13 Mifepristone also delays or inhibits ovulation, which may produce amenorrhea. Direct suppressive effects on endometrial vasculature as well as on reducing stromal vascular endothelial growth factor has also been suggested for reducing menstrual blood loss.13,14 Mifepristone, as a treatment option for myoma, was first reported by Murphy et al.15 Further studies evaluated mifepristone in doses varying from 2.5 to 50 mg/day given for 3 to 6 months, and doses as high as 50 mg and as low as 5 mg were found effective in ameliorating myoma-related symptoms like dysmenorrhea, menorrhagia, and pelvic pressure, and reducing myoma volume by 26 to 57% and inducing amenorrhea in 41 to 100%.16–23

CONCLUSION

Though various pharmacological agents are available that claim to decrease the myomas in size and symptoms, various literature supports 25 mg mifepristone taken over 6 months reduces myoma size by 26 to 57%. In clinical practice, it is not so. Long-term effects of these medicines are not available. So medical management should be used judiciously for symptomatic relief of fibroid in selected group of patients. Large size fibroid should be managed with surgical approach.

REFERENCES


