International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Arvindar et al. Int J Reprod Contracept Obstet Gynecol. 2023 Aug;12(8):2578-2581
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20232316

Case Report

Fertility-sparing surgery for symptomatic uterine fibroid in young women: a case report

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Received: 25 June 2023
Revised: 16 July 2023
Accepted: 17 July 2023

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ABSTRACT

Uterine leiomyoma is very common tumor in women of reproductive age. Clinical manifestation ranges from asymptomatic to very heavy bothersome menstrual bleeding or dysmenorrhoea. Considering the patient age, severity of symptoms and child bearing medical or conservative surgical or hysterectomy is decided. Herer we are presenting a case of A 27 years old Para2 housewife coming from middle socioeconomic status was admitted with history of chronic lower abdominal pain since last 5 years and heavy menstrual bleeding since last 6months. Her period was regular but associated with pain and heavy bleeding. She was normotensive and pulse was 78/min. mild pallor present clinically. On abdominal examination-there is lower abdominal swelling situated in midline almost globular, firm to hard in consistency margins are well defined except lower margins which could not be reached, surface smooth and dull on percussion. Vaginal examination revealed vulva normal, vagina and cervix looks healthy on speculum examination. Bimanual examination shows pelvi-abdominal large mass seem to be arisen from uterus. Both fornices are free. After complete routine and ultrasound evaluation a diagnosis of anterior intramural fibroid was made. As patient wants her fertility to be preserved so decision of open myomectomy was taken. Myoma was removed completely with capsule and without interfering the uterine cavity. Uterine incision was closed. Patient stood well with procedure and discharged form hospital.

Keywords: Fibroid, Myomectomy, Fertility sparing surgery

INTRODUCTION

Uterine fibroids, or leiomyomas, are tumors or growths made of smooth muscle cells, fibroblasts, and other material that grow in or on the wall of the uterus. They are the most common non-cancerous tumors in women of childbearing age. Uterine fibroids can cause pain and abnormal bleeding from the uterus. Sometimes, fibroids can make it difficult for a woman to get pregnant or maintain pregnancy. Currently, the only cure for fibroids is hysterectomy - removal of the uterus, although fibroids can be treated with other methods like medical management, myomectomy, uterine artery embolization and so on to preserve the women`s fertility.[1] Uterine fibroids are growths made of smooth muscle cells, fibroblasts, and other material that grow in or on the wall of the uterus. Fibroids may grow as a single tumor or in clusters. In many cases, a single uterus contains many fibroids. Fibroids can be different sizes or shapes.[1] Bunches or clusters of fibroids are often of different sizes. Fibroids can grow, shrink, or remain a constant size over time.[2] Categories of fibroids based on where they grow: Sub-mucosal fibroids- grow just underneath the uterine lining and into the endometrial cavity. Intramural fibroids- grow in between the muscles of the uterus. Sub-serosal fibroids- grow on the outside of the uterus. Some fibroids grow on stalks that grow out from the surface of the uterus or into the uterine cavity. These are called pedunculated fibroids. Many women have no symptoms of fibroids. However, uterine fibroids can cause uncomfortable or

sometimes painful symptoms, such as: heavy bleeding or painful periods, anaemia, bleeding between periods, Feeling 'full' in the lower abdomen- this is sometimes called pelvic pressure, Frequent urination (caused by a fibroid pressing on the bladder), pain during intercourse, lower back pain, reproductive problems, such as infertility, multiple miscarriages, and early onset of labor during pregnancy, obstetrical problems, such as increased likelihood of caesarean section. Fibroids usually grow in women of childbearing age, and research suggests that they may shrink after menopause. However, research also shows that they are more likely to shrink in postmenopausal white women than in postmenopausal black women. For African American women, fibroids typically develop at a younger age, grow larger, and cause more severe symptoms.[3] Several factors may affect a woman's risk for having uterine fibroids, including the following- age (older women are at higher risk than younger women), African American race, obesity, family history of uterine fibroids, high blood pressure, no history of pregnancy, vitamin D deficiency, food additive consumption, use of soybean milk. Factors that may lower the risk of fibroids- pregnancy (the risk decreases with an increasing number of pregnancies), long-term use of oral or injectable contraceptives.[3-5]

We do not know what causes uterine fibroids. Evidence suggests that multiple factors play a role in their growth. Although exact causes are unknown, research evidence suggests that any or all of these factors might play a role in the growth of uterine fibroids. Genetics (e. g., genetic mutations in the MED12, HMGA2, COL4A5/COL4A6, or FH genes), estrogen and progesterone, growth hormones, Micronutrients, such as iron, that the body needs only small amounts of in the blood.[6-8] For instance, a deficiency of vitamin D may be associated with uterine fibroids, Major stresses.[9,10] Symptomatic fibroids need treatment and management differs with experience of gynaecologist and patient's decidedness to save the uterus (if not for hysterectomy). The conservative management in the form of medical treatment with gonadotrophin-releasing hormone analogs (GnRHa), levonorgestrel intra-uterine device (LNG-IUS) and selective progesterone receptor modulators; and minimally invasive treatment options such as uterine artery embolization and ultrasound- or endoscopic-guided ablation procedures and myomectomy have become increasingly available for management of fibroids.[11]

Myomectomy has become a commonly performed surgical procedure in recent years as more women desire conservation of their uterus in the presence of symptomatic uterine fibroids.[12] The incidence and severity of myomas increase with the premenopausal age, which makes uterine fibroids a common clinical condition encountered in many women of advanced reproductive age.[13,14] Additionally, the recent trend of delayed childbearing and an increase in the number of women in the latter reproductive years have increased the demand for conservative treatment of uterine fibroids for preservation of reproductive potential.[12-15] The surgical treatment of this benign tumor in women aged 40 years or more remains a challenge.[15] In African countries where the prevalence of fibroids is higher, this is furthermore complicated by the fact that many patients also suffer from infertility and wish to preserve their uterus for further childbirth.[15-16] New advances in assisted reproductive techniques now permit women in the later reproductive years to bear a child if the uterus is still intact. This has brightened their fertility prospects, thereby giving them more reasons to choose myomectomy as an alternative to hysterectomy. Abdominal myomectomy for large uterine fibroids can be technically challenging, and it may be associated with the risks of haemorrhage, anemia, wound sepsis, pelvic adhesions and uterine rupture in subsequent pregnancies.[12,13] However, recent studies have shown that the morbidity of myomectomy and hysterectomy is comparable.[17] Newer conservative surgical techniques with minimal invasive approach including laparoscopic myomectomy, uterine artery embolization and magnetic resonance guided focused ultrasound have evolved, but are not readily available in developing countries. Therefore, abdominal myomectomy forms the mainstay of conservative surgical treatment for uterine fibroids, particularly in women who wish to retain their uterus.[13,14,16]

CASE REPORT

A lady of Age-27 years, housewife by occupation, socio-economic status is middle class, Hindu by religion. She is para 2 and have two child which was alive and healthy. Admitted to our hospital with chief complain of pain abdomen since 5 years. And excessive pain and bleeding during menses since last 5-6 months. She complaint of dull aching lower abdominal pain which increases during menses, relieves on analgesics. Excessive bleeding during periods with passage of clots.

Menstrual history- she was having regular cycle with dysmenorrhoea and heavy menstrual bleeding. Obstetric history- she is para 2, I FTND FCH 7 years old alive and healthy, II FTND FCH 5 years old alive and healthy. Past history- there is history of 1 unit PCV blood transfusion preoperatively. Family history- no abnormality detected. Functional history- bowel and bladder are normal. Sleep and appetite was good. Personal history-maintains hygiene, non-smoker and non-alcoholics. Contraceptive history- doesn´t practice any contraceptives. Drug history-nothing significant.

On physical examination- patient alert, conscious and co-operative. Average built, her BMI-19.5 kg/msq. Mild pallor present. No signs of edema, cyanosis, jaundice, and any visible neck veins. Her BP- 110/74, pulse- 78. Systemic examination found to be normal. On abdominal examination, supra-pubic fullness present on inspection. a mass palpable in lower abdomen which is well defined except in lower margin and of 14 weeks size, smooth surface, firm to hard in consistency, mild tenderness present over the mass. Lower margin of the mass could not

be reached. Dull on percussion. On vaginal examination-external genitalia found to be normal on inspection. Cervix look healthy on per speculum examination. On bimanual examination- mass seems to be arisen from uterus which moves with the movement of cervix and vice-versa. Fornices are clear. There is no cleft or groove in between uterus and mass.

Investigation

Image description-ultrasound showing 3×4 cm solid hypoechoic mass in the anterior wall of uterus.

Intra-operative

Under spinal anaesthesia laparotomy was done which was followed by incision on anterior wall of uterus at the surface of fibroid with the help of cautery. The fibroid is separated from the serosa of uterus in the plane of capsule of fibroid with the help of electrocautery to minimise the blood loss. Fibroid was removed without opening of uterine cavity. Hemostatic suture applied followed by base-ball suturing at the surface of uterus. Post-operative patient was stable.

Figure 1: Ultrasound image.

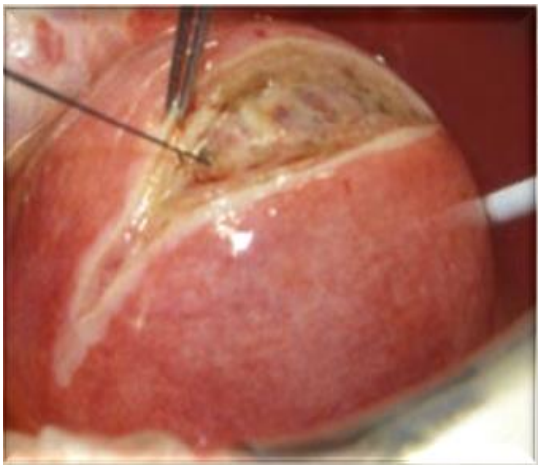

Figure 2: Intra-operative incision on uterus at the surface of anterior wall fibroid.

Figure 3: Intra-operative base-ball suturing at the incision site of uterus.

Figure 4: The removed fibroid specimen.

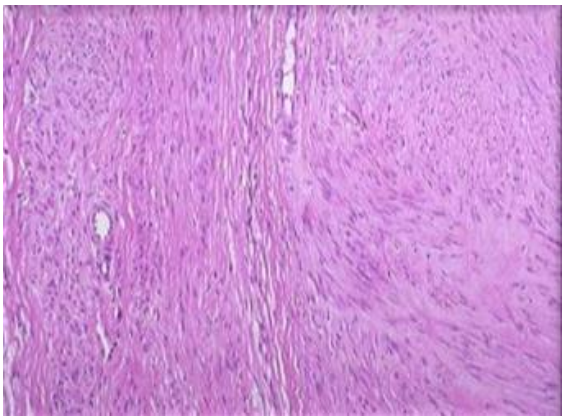

Figure 5: Post-operative- patient was stable.

DISCUSSION

Abdominal myomectomy remains the mainstay of surgical management of uterine fibroids in our environment, especially when fertility conservation is required and also overall trend in treatment for uterine leiomyoma is toward a more conservative approach. Infertility isa common presentation necessitating abdominal myomectomy in majority of cases.[12,16] The link between infertility and uterine fibroids remains unclear. However, it is well

known that the incidence of uterine fibroids increases widely with age, and infertility when really caused by uterine fibroids should, therefore, appear later in a woman's reproductive life.[13]

Myomectomy is effective in reducing menorrhagia and improving dysmenorrhea and pelvic pain and here also transabdominal approach remains the primary route for myomectomy.[18,19] The probability of conception or live birth did not differ appreciably by the myomectomy route among women observed postoperatively.[20] Submucosal fibroid location and distortion of the endometrial cavity (either submucosal or deeply infiltrative intramural fibroid) are most predictive of impaired fertility and probable benefit of surgical removal, and warrant consideration of myomectomy in the sub fertile patient.[21]

CONCLUSION

Uterine leiomyoma is a very common non-cancerous tumor in high estrogenic stage of life means the reproductive age. A careful and judicious decision should be made for management of the symptomatic uterine leiomyoma considering the patient's age, severity of symptoms, size, site and number of fibroids and fertility preservation. Now a days open myomectomy with electrocautery is a very good modality with good success rate in symptoms relief and preserving the fertility instead of conventional myomectomy.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Arvindar, Sen S. Fertility-sparing surgery for symptomatic uterine fibroid in young women: a case report. Int J Reprod Contracept Obstet Gynecol 2023;12:2578-81.