



Uterine fibroids – clinical presentation and complications

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rezime Fibroids are the most common benign tumors of the genital organs in women of childbearing age. In some women, fibroids can be present for years without any symptoms and then are discovered accidentally during a gynecological examination. In others, they can cause significant morbidity and necessitate the need for multiple surgical procedures. The scope of this clinical review is to provide information about the clinical data as well as the complications of uterine fibroids and their clinical presentation. The most common symptoms that may occur in women with uterine fibroids include: bleeding (menometrorrhagia, metrorrhagia or intermenstrual bleeding), pain, symptoms of compression of adjacent structures, changed appearance of the abdomen and infertility. Complications of uterine fibroids include: venous thromboembolism, torsion of pedunculated fibroids, acute urinary retention and renal insufficiency, vaginal and intraabdominal bleeding, mesenteric vein thrombosis and gangrene of the intestine. Complications of uterine fibroids are rare and though they may cause significant morbidity, and rarely, mortality, which indicates the need for further research in this area. Accurate diagnosis is an essential prerequisite for the evaluation of therapeutic options, especially recently, when medical and numerous non-invasive treatment options have become available.

Key Words: Uterine fibroid; uterine myoma; clinical presentation; complications.

INTRODUCTION

Fibroids are the most common benign tumors of the genital organs of women of reproductive age^{1,2}. The first mention of fibroids was by Matthew Baille in 1793³. They can cause significant morbidity and do not occur before puberty^{4,5}. Uterine fibroids can greatly disrupt the

quality of life of women and although they may occur as a single tumors, multiple fibroids are more common (Figure 1) with their incidence increasing with the age of the woman affected^{2,6}. Fibroids are diagnosed in 20-25% of women of reproductive age, and in 30-40% of women older than 40 years^{3,7}. Clinical incidence of fibroid-related symptoms reaches the maximum in the perimenopause, and decreases rapidly after menopause⁸.

Instrumental mapping of uterine fibroids is made with respect to their localization and relationship to the uterine anatomy, classifying them, as cervical and corporal². Cervical fibroids are usually localized around the posterior cervical lip, accounting for only 3% of cases of uterine fibroids and are usually solitary². During their growth, they penetrate through to the rectovaginal septum and laterally to the broad ligament, or grow anteriorly, between the cervix and bladder. According to the direction of growth into the uterine anatomical layers, fibroids are divided into subserous, intramural, and submucous fibroids⁹. Generally, all fibroids are initially intramural². They are clearly demarcated from the surrounding myometrium, with a pseudocapsule, which is formed as a result of myometrial compression caused by fibroid growth^{10,11}. Pseudocapsule of uterine fibroids is a neurofibrovascular structure surrounding the fibroids and containing many neuropeptides and neurotransmitters, which are important for reproductive and sexual function^{10,12,13}.

During their growth, fibroids are displaced by myometrial muscle forces into the uterine cavity and the endometrial lining of the uterus, or towards the outer margin, as submucous or subserous fibroids¹¹. More than 50 % of the total volume of the subserous fibroids is located directly below the perimetrium. If their growth is directed toward the peritoneal cavity they can eventually become pedunculated¹¹. If subserous fibroids are detached from the uterine serosa and not removed from a

woman's body during surgery, they may adhere to the adjacent organs or tissues, thus forming a "parasitic fibroid"¹¹. Intraligamentary fibroids are found on the surface of the uterus, which is not directly covered with perimetrium, but is within the broad ligament. In some cases large intraligamentary fibroids are located outside of the pelvis and form a sort of retroperitoneal tumor. Submucosal fibroids are generally found in contact with the endometrium and account for 5-10 % of all uterine fibroids¹¹. They often lead to recurring clinical symptoms, and can grow totally filling the uterine cavity, until they penetrate through the cervical canal into the vagina, creating a formation known as a nascent fibroid (Figure 2).

The scope of this clinical review is to provide information about the clinical data and also the complications implicated with the development of uterine fibroids and their mode of clinical expression. In researching this topic, the authors reviewed data implicated with clinical presentations and complications of fibroids. Research was performed by the authors exploring the following databases to locate relevant articles: MEDLINE (1966-2014), the Cochrane Library, EMBASE (1974-2014), Science citation index (1974-2014), The China Journal Fulltext Database (1994-2014), Chinese Scientific Journals Fulltext Database (1989-2014), Chinese Biomedical Literature Database (1978-2014), WANFANG database (1980-2014). An internet search was also carried out using the following links: Google, Google scholar, NIH.gov, Medknow.com, Medscape.com, SciVerse and Scopus, MedHelp.org. The following key terms were used to access relevant records: fibroid, myoma, leiomyoma, clinical symptoms, clinical presentation and complication.

Reports of randomized controlled studies were used when available; otherwise literature was chosen that was the most relevant to the topic and used at the authors' discretion. Peer-reviewed articles regarding fibroids and leiomyomas were sorted by relevance and included in the body of this work. Additional articles were identified from the references of retrieved papers. The authors selected papers related to the topic of discussion, extracting relevant findings and synthesizing conclusions for each heading and subheading.

CLINICAL PRESENTATION OF THE FIBROIDS

Uterine fibroids may be present for years in some women without any symptoms to be diagnosed accidentally during routine gynecological examination or investigation for other illness^{2,14}. In others, they are an important cause of morbidity and may result in the need for multiple surgical procedures^{2,5,14}. There are several ongoing studies investigating medical treatment options for uterine fibroids, such as ulipristal acetate (UPA)¹⁵. So far, UPA has shown its efficacy for reduction of fibroid size and bleeding¹⁶. Further studies are necessary to consider its' long term efficacy efficacy as well as the possibility to avoid surgery following UPA treatment. Although UPA could be a good option for women seeking pregnancy,



FIGURE 1.
MULTIPLE UTERINE FIBROIDS

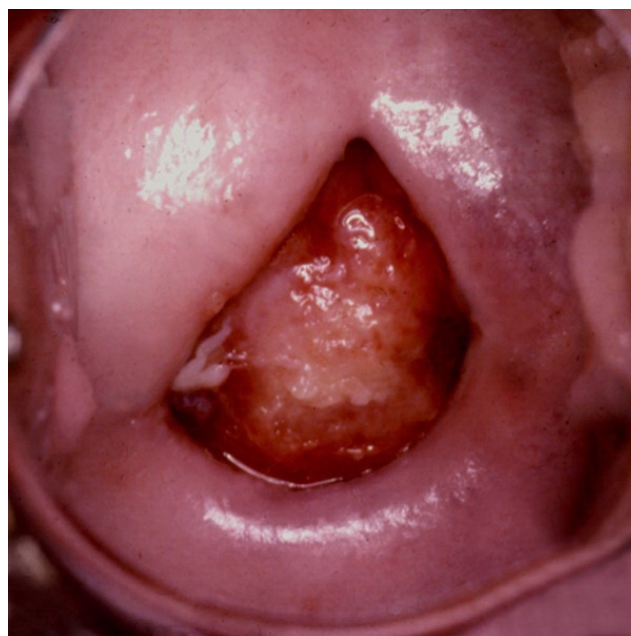


FIGURE 2.
NASCENT FIBROID

its' safety in this population has not been documented yet¹⁶.

COMMON CLINICAL SYMPTOMS

The reason why some fibroids are symptomatic, and some are not has not been understood yet¹⁷, though size, localization and number of fibroids determine the symptoms. Nevertheless, the onset of symptoms is certainly influenced by many factors^{2,17}. The size of fibroids associated with the presence of symptoms is still unknown¹⁷. Sometimes women with a uterus that reaches the umbilicus do not report any problems, except for the enlargement of the abdomen, which is usually attributed to an increase in body weight¹⁷. It is also not proven that women with multiple fibroids tend to have more symptoms, compared with those who were diagnosed with a



FIGURE 3A.
CHANGED APPEARANCE OF ABDOMEN IN PATIENT
WITH GIANT FIBROID



FIGURE 3B.
GIANT UTERINE FIBROID IN THE SAME PATIENT

single fibroid¹⁷. It is believed that only 20-50 % of women with fibroids have symptoms. Symptomatic fibroids usually occur in women in their thirties and forties, although they can occur in other age groups as well^{2,18}.

The most common presenting symptoms of uterine fibroids are: bleeding and secondary anemia due to menometrorrhagia, metrorrhagia or intermenstrual bleeding, pain, symptoms of compression of adjacent organs, change of the abdomen wall outline and infertility^{2,14,19}. In 62% of patients with uterine fibroids there are multiple symptoms present².

BLEEDING

The possible causes of bleeding are: the increased surface of the endometrium caused by an increase in surface of the uterine cavity due to fibroids, increased vascularization of the uterus, changes in uterine contractility, possible ulcerations of endometrium on the surface of submucosal fibroids, venous dilatation caused by compression of fibroids, as well as dysfunction of vasoactive factors generated in fibroids^{2,6}. Nascent fibroids can lead to profuse vaginal bleeding⁹ and, due to heavy and prolonged bleeding, can lead also to secondary anemia¹⁸.

COMPRESSION OF ADJACENT ORGANS CAUSED BY ABDOMINAL MASS

Lower abdominal mass is the commonest symptom in populations with late presentation of fibroids, accompanied with symptoms caused by compression of the surrounding organs^{2,14}. The large fibroids cause the increase in uterine volume, giving it an irregular, nodular appearance. In such patients a change in the shape and volume of the stomach may be noticed, till to their direct palpation through the abdominal wall (Figures 3a and 3b).

Pressure on the bladder can cause dysuria and pollakiuria, and rarely, urinary retention^{2,6}. The rectum pressure caused by fibroids can lead to constipation². Large and especially intraligamentary fibroids can cause pelvic veins pressure, leading to edema of the legs and varicosity, with, very rarely, venous stasis and thrombosis²⁰. Compression of adjacent organs can cause tenderness (pain, back pain, lower back pain or propagation to the leg due to pressure on the pelvic nerves). Extremely large fibroids can lead to respiratory problems².

PAIN

Pain is present in 34 % of patients with uterine fibroids; it occurs gradually over time and increases, usually in form of a dull pain²¹. Acute pain may occur in pedunculated fibroids, as a result of the twisting of the fibroid vascular pedicle and, generally, it is accompanied by signs of peritoneal irritation. Tenderness may be the result of the degenerative changes in the fibroid when the resulting ischemia and necrosis can lead to the need for emergency surgery². Passing of a nascent fibroid through the dilated cervical canal can cause painful uterine contractions⁹.

Uterine fibroids can also be the cause of dysmenorrhea and dyspareunia. The pain is not related to the size and number of fibroids, but the localization of the pain will depend on the fibroid's position².

INFERTILITY

Fibroids are not so common a cause of infertility and they are present in only 3% of the cases in which no other cause is identified². According to the literature data, 27% of women with fibroids are infertile²¹. Studies that have examined the impact of different fibroid localization and reproductive performance have yielded conflicting results²². The impact of fibroids on reproductive performance largely depends on the fibroid's size and location¹⁸. Fibroids that are associated with infertility are: those with more than 50 mm in diameter, fibroids located near the uterine cervix and near ostium of Fallopian tubes, and submucosal fibroids²². Submucosal fibroids that distort the uterine cavity can reduce the pregnancy rate up to 70%⁶. Research in population subjected to in vitro fertilization (IVF) concluded that fibroid size influences the pregnancy implantation rate, particularly in fibroids larger than 4 cm in diameter⁸.

For many years it was thought that intramural and subserous fibroids did not have a significant impact on reducing fertility⁶, though many results on the impact of fibroids on IVF outcome are conflicting²². A meta-analysis of studies published on the impact of fibroids on the outcome of IVF showed that the success rate is reduced in cases of submucosal and intramural fibroids that distort the uterine cavity, while intramural and subserous fibroids do not affect the success rate²³. However, meta-analysis published later has shown that fibroids that do not distort the uterine cavity may also influence the success rate of IVF procedure⁸. Significance of these studies for assessment of the effects of fibroids on reproductive ability lies in the fact that in many of them the impact of other factors, such as the male factor and the tubal factor or adhesion in pelvis was not considered²². In a recently published paper, Yoshino et al.²⁴, based on nuclear magnetic resonance imaging, showed that the abnormal peristaltic movements of corpus uteri occur in women with intramural fibroids. These authors have subsequently shown that myomectomy reduces the frequency of abnormal peristaltic movement of the uterus in the luteal phase of the cycle, concluding that these movements could be a contributing factor to the cause of infertility in women with fibroids²⁵. Many hypotheses evaluate the relationship between fibroids and infertility^{22, 24, 25}. Fibroids can also cause anatomical obstruction of the Fallopian tube or the endocervical canal, with deformation of uterine cavity and a consequent reduction of the implantation area and embryo nidation⁸. Cornual fibroids can cause distortion of the Fallopian tube as well, thus leading to a narrowing or obstruction of the Fallopian tube by external compression²⁴. Intracavitary distension increases the distance that spermatozoa must pass through⁸. Fibroids also affect sperm transport by the disruption of the uterine contractility during intercourse, while myometrial hypercontractility, which occurs during the degeneration of fibroids, represents the second possible cause⁸. Proper implantation may be disturbed also by endometrial atrophy and ulceration caused by submucosal fibroids and/or vascular changes that are the result of impaired blood circulation to venous plexuses of myometrium¹⁷. Fibroids also disrupt the paracrine milieu of the uterine cavity, creating an environment that is unsuitable for the embryo²⁴. Frequent and prolonged bleeding in women with submucosal fibroids reduces the frequency of coitus, which can also be a cause of infertility²⁴. Many retrospective observational studies suggest a beneficial effect of myomectomy on the reproductive outcome, and there are significant prospective randomized studies that confirm this observation²³. Additionally, there is no evidence of the existence of differences in the rates of pregnancy and live births between different applied techniques of myomectomy²¹. Myomectomy procedure performed in women whose infertility could not be explained in any other way, led to pregnancy rate of 61%⁸. In 40.4 % of infertile women pregnancy was spontaneously achieved one year after the myomectomy, versus 21.4 % of patients in the group of women in whom

myomectomy was not performed²⁶. The negative effect of fibroids on fertility is also reflected in the need of postponing the use of assisted reproduction techniques (ART) after myomectomy in cases of intramural fibroids until adequate healing of the uterine scar²⁴. In cases of surgical removal of a greater number of fibroids, pregnancy rate after the myomectomy is lower. This is explained by the existence of more massive postoperative adhesions as a result of multiple uterine incisions²⁰. Studies performed on women involved in the process of ART have shown an increased risk of ectopic pregnancy in patients who had previous myomectomy⁸.

UNCOMMON CLINICAL PRESENTATIONS AND SYMPTOMS

Cases of ascites and pseudo-Meigs' syndrome caused by fibroids were also described². Very rarely, secondary polycythemia that occurs due to increased values of erythropoietin is also possible in patients with uterine fibroids². Another rare clinical manifestation of fibroids is called "benign metastasizing leiomyomatosis", and it is characterized by fibroid-similar lesions in the lungs and pelvic lymph nodes in women with fibroids². It represents a hormone-dependent disorder manifested with worm-like protrusions of myomatous tissue into the myometrial or pelvic veins, sometimes with expansion into the inferior vena cava, right heart and pulmonary arteries². These lesions may also be noted after hysterectomy. Leiomyomatosis peritonealis disseminata or diffuse peritoneal leiomyomatosis is characterized by numerous leiomyomas throughout the peritoneal cavity²⁷. It is a benign disorder that may mimic malignancies, nevertheless malignant transformation has been described²⁷. Definitive diagnosis relies on histological examination.

COMPLICATIONS OF FIBROIDS

Although fibroids are very common, their complications are relatively rare, but when they occur, they are the cause of significant morbidity, or even mortality in rare cases^{18,28,29}. Complications of fibroids include: intra-abdominal bleeding, profuse vaginal bleeding, uterine inversion, uterine torsion, hydroureters and/or hydronephrosis, urinary retention, renal failure, venous thromboembolism, necrosis and infection, mesenteric vein thrombosis, intestinal gangrene and malignant alteration^{18,29}.

ACUTE COMPLICATIONS

Degenerative changes of fibroids present in about two-thirds of all fibroids and include hyaline, hydropic, myxoid and fatty degeneration, calcification, infection and suppuration, necrosis (including the so-called red degeneration) and rarely malignant alteration². Sometimes, degenerative changes of fibroids can cause clinical symptoms that require surgical treatment³⁰.

Most acute complications of fibroids are presented as acute abdomen and require immediate surgical exploration²⁰. Von Rokitansky described the first case of intra-abdominal bleeding due to fibroids in 1861 as an

autopsy finding²². In such cases, bleeding is usually of venous origin, rarely arterial, and it usually occurs in women suffering from arterial hypertension²². Predisposing factors for this complication include: increased intra-abdominal pressure, injury, fibroids with a diameter greater than 10 cm and a bimanual clinical examination under general anesthesia²². It is believed that increased intra-abdominal pressure can lead to the passive congestion and rupture of superficial veins²². Menstruation, pregnancy and uterine torsion can also cause venous congestion and rupture of veins. Degenerative changes in the fibroids could lead to necrosis and spontaneous rupture of the veins²². Intra-abdominal bleeding is clinically manifested by sudden onset of abdominal pain, weakness, dizziness and vomiting, followed by signs of hemorrhagic shock. Profuse vaginal bleeding is typically caused by the nascent and submucosal fibroids, and can occur after the GnRH agonist therapy^{9,22}. Nascent fibroids can lead to inversion of the uterus, causing a state of shock and requiring immediate intervention²⁰. Torsion can occur in subserous fibroids, rarely in fundal fibroids, when the whole uterus torques³¹. It can be further complicated by gangrene and peritonitis²². Fibroid torsion is manifested by signs of peritoneal irritation (acute abdominal pain, nausea, vomiting), which can be followed by state of shock indicating an urgent surgery. Pedunculated fibroids can also be twisted around the pedicle, causing fibroid hemorrhagic infarction².

COMPRESSION BY LARGE UTERINE FIBROIDS

In case of large fibroids, ureteral compression can occur, as a slow and painless process that leads to hydroureter and/or hydronephrosis and renal failure^{26, 32}. Incarceration of the large uterine fibroids may rarely lead to urinary retention it is more frequently encountered during pregnancy^{1,21,22}. Apart from pregnancy, incarceration occurs in the cases of agonist of gonadotropin-releasing hormone administration (GnRH), mainly due to uterine enlargement as a consequence of the introduction of this type of treatment²². Fibroids that cause this complication usually fill the small pelvis and grow into the abdomen.

Deep vein thrombosis is a rare complication of fibroids and it is most common in the perimenopause^{20, 28, 29}. It occurs as a result of the compression of pelvic venous vessels due to large fibroids, causing venous stasis and consequent thrombosis. Deep vein thrombosis is clinically manifested by signs and symptoms of thrombosis with or without pulmonary embolism and the existence of a mass in the pelvis. Additional complications that may arise include the development of pulmonary hypertension^{22, 29}.

INFECTIONS AND INFLAMMATIONS

Necrosis of fibroid is most common in pregnancy, after miscarriage and birth, due to compromised circulation¹. It is manifested by pain, bleeding and fever. Circulatory disorders caused by fibroid compression or twisting of pedicle are not uncommon, with consequent infection, ulceration and necrosis of the tumor¹. Fibroid infection causes fever, pain and odorous vaginal secretion. It oc-

curs in the case of necrotic fibroids and causes enlargement of the uterus and in the cases of myometrial perforation, can lead to peritonitis and sepsis. Rarely, a fibroid infection leads to a so-called pyomyoma, which occurs most often during or after pregnancy or after the menopause¹. Most susceptible to infection are submucosal fibroids, due to penetration of pathogenic micro-organisms from the lower genital tract. In rare cases suppuration and abscess formation occurs in fibroids due to intrauterine interventions (dilatation and curettage), but can occur after childbirth or abortion, especially in cases of submucosal fibroids^{1,2}. Subserous and intramural fibroids are rarely subjected to infection, which if it occurs is usually accompanied by inflammation of the adnexa. Inflammation initially affects the peritoneal surface and thereafter penetrates, to varying degrees into the deeper structures. Fibroid necrosis is usually caused by infection or disturbed blood supply. Pedunculated fibroids can be twisted around the pedicle which leads to necrosis, and sometimes gangrene².

Intestinal obstruction due to uterine torsion and mesenteric venous thrombosis caused by compression pedunculated fundal fibroids, have been documented in the literature cases²⁰. Those complications can consequently lead to the gangrene of the intestines.

HEMATOLOGICAL COMPLICATIONS

Compression of the ureters by the fibroids can lead to excessive creation of erythropoietin in the kidney^{2, 28}. Biochemical studies have shown that myometrium has the ability to produce erythropoietin, whose level is elevated in patients with polycythemia²⁸. Reactive thrombocytosis and polycythemia, can contribute to thromboembolic complications of the fibroids²⁸. Polycythemia in women with uterine fibroids disappears after surgery.

SUSPECTED MALIGNANT ALTERATIONS

Malignant alteration of uterine fibroids occurs mainly in postmenopausal women and is rarely asymptomatic. The main presenting symptoms of uterine leiomyosarcomas are abnormal vaginal bleeding, pain in the lower abdomen and a pelvic or abdominal mass³³. In the past, if sudden growth of uterine fibroids is observed, especially after menopause, malignancy should be suspected and these tumors should be surgically removed. Recent evidences indicate that in premenopausal women, "rapid uterine growth" almost never indicates presence of uterine sarcoma³⁴. Parker and colleagues³⁵ examined 1,332 women who had undergone a hysterectomy for uterine fibroids as the sole indication for surgery. Only 1 patient out of 371 women operated on for a "myoma fast-growing" had proved to be a leiomyosarcoma. When the surgeons had judged that the myoma was at "rapid growth", defined as an increase of uterine volume as a womb of 6 weeks of pregnancy in one year of observation, none of the 198 patients who had this diagnosis was later shown to a uterine sarcoma at histological examination. Two of

these women had instead endometrial stromal sarcoma. A patient of 30 years in the group of patients candidates for hysterectomy showed a normal uterus 22 months before; to gynecological presurgical, had a very large size of the uterus, such as a uterus of 16 weeks. After surgery, histological examination was shown a leiomyosarcoma. None of the 198 patients who had the criteria of "rapidly growing myoma" had a leiomyosarcoma, a mixed mesodermal tumor, or endometrial stromal sarcoma. None of the 17 postmenopausal women admitted for rapid uterine growth proved to be a sarcoma³⁵.

The leiomyosarcoma is a very rare condition, has an incidence ranging from 0.5 to 3.3 per 100,000 women per year, with a further incidence of sarcomas in women with myomas at rapid growth of 0.27%³⁶. Scientific data strongly suggest that uterine leiomyosarcomas are solitary lesions and are not commonly found in association with uterine myomas. If there is malignant transformation of uterine leiomyomas in leiomyosarcomas, is a rare event³⁷. The hypothesis that a uterine leiomyosarcoma derived from a myoma or are the result of malignant transformation of benign leiomyomas is never demonstrated³⁸.

There is no scientifically validated screening instrument that diagnoses a sarcoma, the diagnosis of sarcoma is purely histological and sometimes mixed with areas of benign myoma. In fact, to perform a diagnosis of leiomyosarcoma is not easy, even on extemporaneous histological examination. In most medical centers, the frozen section is not the histological technique for the final diagnosis. From one to three slides of a so-called "fibroid" can be routinely assessed when examining the frozen sections. It is more common than you think wrong or missing the diagnosis of uterine leiomyosarcoma in the frozen section^{39,40}.

PREGNANCY COMPLICATIONS RELATED TO UTERINE FIBROIDS

The majority of fibroids in pregnancy are diagnosed incidentally on routine obstetric ultrasounds. When a mass is suspected, ultrasound is non-invasive, relatively inexpensive, fast, widely available and safe in pregnancy making it the first line imaging technique^{1,41}. When detected incidentally, fibroids only need to be followed by serial imaging if there is concern for fetal development, utero-placental insufficiency due to fibroid location in close proximity to the placenta, surgical planning in the event of a planned cesarean section or obstruction of the birth canal⁴².

Given that uterine fibroids are estrogen and progesterone sensitive, it has been theorized that fibroids would increase in size during pregnancy, due to elevated serum estrogen levels. However, studies have shown that the majority of fibroids undergo no significant change in volume. Fibroids often change shape during pregnancy, becoming more flattened and elongated as the uterus grows and stretches⁴³.

Prospective studies utilizing serial ultrasound to assess the change in fibroids during pregnancy have shown that most (60-78%) do not increase in volume. Contrary to popular thought, some fibroids may even decrease in size throughout the course of pregnancy, particularly after 30 weeks⁴².

Most women with fibroids remain asymptomatic with uncomplicated pregnancies¹. While the true effects of fibroids on pregnancy remain uncertain, it has been estimated that 10 to 40% of patients with fibroids will experience a complication⁴⁴.

The fibroids effects on recurrent first trimester pregnancy loss, and what studies there are, do not show that the majority of fibroids can be implicated as a cause of this devastating condition, in which fibroids causing of decreased regional blood flow. The majority of data concerning fibroids related to recurrent pregnancy loss compare women before and after myomectomy⁴⁵. Other data have consistently shown that submucosal fibroids have the greatest effect on first trimester pregnancy loss when compared to fibroids in other locations, and subsequently should be removed to improve pregnancy outcomes. When fibroids have a definitive effect on the intrauterine cavity, they may warrant removal to assist in reproductive outcomes, and when they clearly are separate, removal may not provide any therapeutic benefit⁴⁶.

Fetal malpresentation is one of the more commonly cited outcomes associated with fibroids in pregnancy^{1,47}. Uterine fibroids have been associated with an increased risk of preterm labor and delivery^{1,48,49}. Studies have indicated a positive correlation with preterm delivery and fibroid volume⁵⁰. Some studies report greater risk of placental abruption with fibroids¹. A more significant risk is suggested with those fibroids that have an increased volume or retroplacental location^{1,26,47}.

The majority of fibroids are asymptomatic during pregnancy and do not require treatment, however, when fibroids undergo 'red-degeneration,' torsion or impaction, they may be the cause of severe localized abdominal pain and require immediate workup and treatment in pregnancy^{1,31,42}.

CONCLUSION

Fibroids are the most common benign tumors of the genital organs in women of reproductive age. It has not yet been determined why some fibroids are asymptomatic and others not. It also remains undefined which size of fibroid is linked with clinical symptoms. Although rare, fibroid-related complications may cause significant morbidity and rarely mortality, which supports the need for further research in this area. Accurate evaluation of clinical presentation is an essential prerequisite when choosing an appropriate therapeutic option, from the many non-invasive and medical treatments which have become available for the treatment of fibroid tumors in recent years.

SUMMARY

MIOMI UTERUSA - KLINIČKA SLIKA I KOMPLIKACIJE

Miomi su najčešći benigni tumori genitalnih organa žena u reproduktivnom periodu. Kod nekih žena miomi postoje godinama bez ikakvih simptoma i slučajno se otkriju pri ginekološkom pregledu. Kod drugih, predstavljaju značajan uzrok morbiditeta i mogu prouzrokovati potrebu za višestrukim hirurškim zahvatima.

Cilj ovog preglednog rada je prikaz podataka o kliničkoj slici i komplikacijama mioma uterusa.

Najčešći simptomi su: krvarenje (menometroragija, metroragija ili intermenstrualno krvarenje), bolovi, simptomi kompresije okolnih organa, izmenjen izgled abdomena i infertilitet. Iako su miomi veoma česti, komplikacije mioma su relativno retke. Komplikacije mioma uključuju: venski tromboembolizam, torkvaciju pedunkularnih mioma, akutnu urinarnu retenciju i renalnu insuficijenciju, vaginalno i intraabdominalno krvarenje, trombozu mezenteričnih vena i gangrenu creva. Komplikacije mioma mogu biti uzrok značajnog morbiditeta, retko i mortaliteta, što govori u prilog potrebe za daljim istraživanjima u ovoj oblasti.

Tačna dijagnoza je osnovni preduslov za procenu terapijskih opcija, naročito u novije vreme, kada postaju dostupne brojne neinvazivne i medikamentne mogućnosti lečenja.

Ključne reči: miom uterusa; fibroid uterusa; klinička slika; dijagnoza

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