

**RISK FACTORS ASSOCIATED WITH UTERINE FIBROIDS: A SYSTEMIC REVIEW****I. John Wesley***, Anju P. C.¹, Syama Gopinath¹, Ranjeth R.¹, Resmi Vijayaseenan¹, Amritha M. S.¹ and William Arputh Sundar²

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ABSTRACT

Myomas are benign hyperplastic lesion of uterine smooth muscle cells. The most likely presentation of fibroids is by their effect on women menstrual cycle or pelvic pressures symptoms. Sometime Myomas can cause significant and life threatening uterine bleeding, pain, infertility and in extreme cases ureteral obstruction and death. The severity of the condition increases with the duration of existence of fibroid and its location. The diagnosis of fibroids is made possible through Ultrasonography and CBC. Several factors are found to be associated with increasing and decreasing the risk of development of fibroids. Through this article we review various risk factors that are associated with development of uterine fibroids.

KEYWORDS: Fibroids Pregnancy Fertility Symptoms Clinical features Risk factors Diagnosis.**INTRODUCTION**

Leiomyomata uteri(uterine fibroids) are benign tumors of the smooth muscle of uterus. It's a common disease in women of child bearing age, accounting for 52% of benign tumors in Gynaecology. They are monoclonal tumors of the uterine smooth muscle cells and consist of large amounts of extra cellular matrix that contain collagen, fibronectin, and proteoglycans. They are commonest benign tumors of the uterus, and are typically round well-circumscribed masses. They can range in size from a few millimeters to massive growths of 20cm diameter and more. They are estrogen and progesterone dependent tumors, very rare before menarche, common in reproductive life, and frequently regress in size after menopause.

Symptoms

Many women who have fibroids may be asymptomatic. In women who have symptoms the most common symptoms of uterine fibroids include:

- Heavy menstrual bleeding
- Menstrual periods lasting more than a week
- Pelvic pressure or pain
- Frequent urination
- Difficulty in emptying the bladder
- Constipation
- Backache or leg pains

Types of uterine fibroids

- Submucous myomas: Inside the cavity of uterus
- Intramural myomas: In the wall of the uterus
- Subserous myomas: On the outside wall of the uterus

- Pedunculated fibroid: Fibroids on the outside wall that are connected to the uterus by a stalk.

Diagnosis

- Ultrasound: It uses sound waves to get a picture of uterus to confirm the diagnosis and to map and measure fibroids.
- Lab tests: These might include a complete blood count (CBC) to determine whether the patient have anemia because of chronic blood loss and other blood tests to rule out bleeding disorders or thyroid problems.

Risk Factors of Fibroid Uterus

Uterine fibroids may be associated with infertility and in some even suggest that Myomectomy helps to improve fertility. But women with intramural fibroids have no difference in pregnancy rate after undergoing myomectomy. In the post-partum period, women with fibroids have increased risk of post-partum hemorrhage secondary to the risk of uterine atony.

Age

Risk of uterine fibroids increases after 40 years.

Older pre menopausal uterus is less susceptible to fibroid development.

Delaying the first pregnancy until the third decade of life also places women at higher risk of uterine fibroids.

Early Menarche

The risk of uterine fibroids increases with earlier age of menarche.

Early age of menarche is also a risk factor for other hormonally mediated conditions such as Endometrial and Breast CA.

Parity and Pregnancy

Parity is inversely associated with risk of Fibroid development. Although a direct protective effect of pregnancy has been demonstrated, little is known of the mechanism.

It has been suggested that during post-partum uterine remodeling small lesions may be subject to selective apoptosis and fibroid tissue may be highly susceptible to Ischemia during uterine remodeling and parturition.

Family History or Heredity

A maternal family history (mother or sister) of fibroids may increase a women's risk of fibroid development.

Change in Hormone Levels

Some evidence suggests that changes in hormone levels associated with other medical conditions could increase risk of fibroids.

Body Weight

Obesity is a contributing factor to fibroid development with risk and weight being parallel.

Fibroid growth is triggered by oestrogen, which can be over produced by excess abdominal fat.

Diet and Life Style

A diet high in red meat may increase risk of fibroids.

Lower than suggested intake of fruits and green vegetables can also contribute to risk.

Alcohol consumption including consumption of Beer is another dietary contributing factor.

An association has been reported between increased caffeine intake and risk of developing uterine fibroids.

Elevated Blood Pressure

Hypertension was previously linked to fibroid development through a putative process analogous to Atherosclerosis in which raised blood pressure cause smooth muscle injury and or cytokine release. There by increasing the risk of fibroid onset or growth.

Metabolic Factors

Hyperinsulinemia induced by Insulin Resistance, is associated with upregulations of serum insulin like growth factor 1 (IGF 1) and epidermal growth factors and these agents could influence the development of uterine leiomyomas by enhancing ovarian hormone secretion or

directly promoting myometrial smooth muscle cell proliferation.

Oral Contraceptives

Long term uses of oral contraceptives have a protective effect on the development of uterine fibroids.

Any other factor that reduces the exposure of the myometrium to oestrogen or increase progesterone levels such as oral contraceptive use, parity or smoking would tend to reduce the risk of disease.

CONCLUSION

Uterine fibroids are common among women seeking fertility and during pregnancy. Submucosal fibroids reduce fertility, and removal increases clinical pregnancy rates. Uterine fibroids are essentially benign, but they are associated with significant morbidity to women during their reproductive years and sometimes even after menopause. Patients may be symptomatic or asymptomatic and even symptoms vary in different patients. The most commonly used methods of diagnosis of uterine fibroids are Ultrasonography and Blood analysis. Based on the location uterine fibroids could be classified into different types.

The factors associated with increased risk of uterine fibroids include

Age > 40 years
Early menarche (< 10 years)
Family history
Obesity

The factors associated with decreased risk of uterine fibroids include

Increased parity
Smoking
Late menarche (older than 16 years)
Use of oral contraceptives

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