



## Review Article

## Size of Fibroids Affecting the Post Menopausal Women

Ayesha Irshad<sup>1</sup>, Syeda Khadija Tul Sughra<sup>1</sup>, Ayesha Ahmed<sup>1</sup>, Areeba Aslam<sup>1</sup>, Abdullah Amjad<sup>1</sup> and Amna Irshad<sup>1</sup><sup>1</sup>University Institute of Radiological Sciences and Imaging Technology, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan

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## \*Corresponding Author:

Ayesha Irshad  
UIRSMIT, University of Lahore, Lahore, Pakistan  
[ayasha.ir54@gmail.com](mailto:ayasha.ir54@gmail.com)

## ABSTRACT

Uterine fibroids (UFs) are benign lesions that affect females during their reproductive age, peaking in the perimenopausal duration. **Objective:** To evaluate the effects of sizes of fibroids in post-menopausal women **Methods:** Data for this article was extracted from google scholar and PubMed, including 28 articles published from 2003 to 2020 **Results:** UFs are benign lesions that affect the females during their reproductive time and at peak during peri-menopausal duration and after menopause UFs are reduced. Estrogen, growth hormone, and progesterone all influence their pace of growth. The most successful treatment is hysterectomy. **Conclusions:** In postmenopausal women; the chances of UFs reduce. Medical treatment of UFs may provide symptom alleviation and serve as a transition into menopause. Although it is true that UFs shrink with the start of menopause; this is not occurred in all cases. The most successful treatment is hysterectomy. Further studies are required to better understand the pathophysiology of UFs and to know risk factors.

## INTRODUCTION

Menopause is the decrease of ovarian follicle development due to the permanent cessation of menstruation [1]. Race, socioeconomic level, age of menarche, and the number of preceding ovulations had little effect on the age at menopause, which seems to be genetically fixed. Toxic to the ovarian factors results in an early menopause age; for instance, females who smoke have an early menopause age [2]. Females with ovaries removed or had hysterectomy with their ovaries retained may also suffer to earlier menopause [3]. Fibroids, also known as uterine leiomyoma (UL), are benign lesions that originate from smooth muscle cells of the uterus. The majority of Americans develop malignancies. By the time they approach menopause, women are in their forties and fifties. About a quarter of females become symptomatic [4]. Uterine fibroids (UFs) are reason for most of gynecologic problems, such as heavy bleeding, pelvic discomfort, incontinency of urine, infertility, and pregnancy problems, although their benign nature. Despite

UL, despite their benign nature, cause significant gynecologic morbidity, including pregnancy problems suffer excessive bleeding, pelvic discomfort, urine incontinence and infertility [5]. Before puberty, fibroids are less common, but they become more frequent during reproductive years and after menopause decrease in size. Fibroids are benign lesions that develop from smooth muscular tissue (myometrium) of the uterus and respond to hormones by proliferating (estrogen and progesterone). Fibroids are less common before puberty, frequent in the reproductive years, and reduce in size after menopause [6]. Sub-serosal (protruding outside the uterus), (within the myometrium) intramural, and submucosal (protruding into the uterus) are main types of uterine fibroids. Fibroids in the uterus are categorized according to their size. Uterine fibroids in premenopausal women shrink about 3% to 7% over six months to three years, with the majority shrinking in size at menopause [7].

## METHODS

In this review article, data was extracted from google scholar and PubMed. A total of 28 original articles were downloaded from year 2003 to 2020. Among these, 18 articles provided useful data on the given topic, while 10 articles showed no significant relevant information.

## RESULTS

As women get older, they are more likely to develop uterine fibroid tumors (also known as leiomyomas). Although UFs are the frequent solid tumor in the women before menopause, they are not causing symptoms in roughly most of those affected and hence disappear without causing any symptoms following menopause. The period preceding the cessation of menses is known as perimenopause. The levels of key hormones began to change throughout this time. It's currently unclear why few uterine fibroids shrink while some don't throughout this duration, although hormone factors are considered to play a role. Although it is true that with the start of menopause, UFs regress, this does not occur in all cases. The most successful treatment to date is hysterectomy. Other intriguing therapy alternatives are being investigated, though. More study is needed to better understand the physiopathology of UFs and to identify risk factors.

## DISCUSSION

According to one study, there was a high prevalence of tumors detected by ultrasonography varied in size from 4% of females aged 20 to 30 years old to females between the ages of 30 and 40 years, the rate ranges from 11-18% and 33% of females between the ages of 40 and 60 years [8]. The highly frequent lesions of female reproductive tract are leiomyomas. They are most likely unicellular in origin [9]. Estrogen, growth hormone, and progesterone all influence their pace of growth. Fibroid tumors of the uterus develop during the reproductive years and after menopause tend to shrink and start to growing pregnancy [10]. Untreated fibroids in premenopausal women regress about 3-7% over six months to three years with the majority shrinking in size at menopause [11]. Follicle stimulating hormones (FSH) levels, for example, begin to rise steadily toward the end of the reproductive years. The amount of progesterone and estrogen in the body gradually dropped [12]. The ratio of clinical symptom of UFs is highest throughout the around menopausal years and decreases after the end of menstrual cycle [13]. Some advantages of menopause is the reduction in myoma size and symptoms [14]. UFs are notable for their reliance on the ovarian steroid estrogen and progesterone. In the presence of menopause, UFs are more likely to regress [15]. In a large

prospective cohort research that showed the effect of hormone therapy and obesity on the chances of UFs in postmenopausal females. Obesity was found to be a factor in their findings measured as a body mass index [BMI]. Regardless of HT use, a body mass index of >30 kg/m<sup>2</sup> increased the risk of UF. Because UFs are estrogen sensitive, obese women's greater adiposity provides a stronger estrogenic environment through peripheral estrogen conversion, predisposing them to UF proliferation even in post - menopause females [16]. The reduced amounts of circulating estrogen and progesterone in menopause cause the natural regression of UFs. Because of UF grow again, many doctors are concerned about HT. The research on this topic is still continue. UF growth increased in the two years of HT, then declined after that, according to several prospective clinical trials [17]. In another investigation it was notice that risk of uterine fibroid growth increase with high dosages of medroxyprogesterone acetate(5grm) and transdermal estrogen. As a result, if the HT contains progestin, to prevent uterine fibroid growth a lower dose should be administered. According to Chang et al., females have an ultrasound every three months who benefit from HT. HT should be phased out if the size of UFs is raised [19]. According to another study., fibroid growth is twice as fast in females under the age of 35 as it is in females beyond the age of 35 [16]. in all races this is not same According to Peddada et al, until the age of 35, in white females and African American growth rate is same. However, growth rates in white females fall beyond 35, but in African American females it is not [20]. To alleviate the symptoms of UFs menopause may assist, but it cannot stop them from occurring. In the same California cohort research cited above had the second highest prevalence of UFs in the age group of 49-54years [21]. It has been found to be a risk factor that menarche before the age of ten years, but menarche beyond the age of sixteen years appears to be a protective factor. The progression of uterine fibromatosis the uterus is the female reproductive organ. Menarche is linked to endometriosis and breast cancer and disorders in which uterine fibromatosis may play a role in relation to [22]. The occurrence of uterine fibromatosis is inversely proportional to parity. The pregnancy's protective mechanism is unknown; however, it is thought to be minimal. During uterine regression, lesions may occur. Apoptosis causes reconfiguration during confinement processes that are taking place now [23]. Caffeine and alcohol use were found to have a direct proportional link with the occurrence of uterine fibromatosis in recent investigations. Caffeine consumption of more than 500 mg per day was linked to a

higher likelihood of developing fibromatosis of the uterus [24]. The harm generated by the infection is the postulated mechanism to explain the causation between inflammation and tumor proliferation. Causes the extracellular matrix to develop, cellular proliferating as a result of pro-inflammatory and growth factors apoptosis reduction and improper tissue healing [25]. Uterine fibromatosis is less likely to develop if you smoke. Nicotine inhibits aromatase and lowers estrogen hormone levels in the ovary and follicles. apoptosis, and by lowering the rate of conversion of estrogens to androgens Nicotine also has an effect on the brain [26]. Estradiol metabolism is inhibited by hydroxylation, which reduces the amount of estradiol in the body and bioavailability of the tissues. Uterine fibromatosis was not previously recognized as a disease with a hereditary component [27]. Recent research has demonstrated the significance of cytogenetic variations in the human body. The etiopathogenesis of uterine fibromatosis is unknown [28]. Thus, Uterine fibroma is caused by around 40% of all uterine fibromas. Cytogenetic changes seen in various kinds of cancer Renal, pulmonary, and leiomyosarcoma are examples of tumors. Obesity is linked to the development of uterine fibromatosis. Various studies have found that female fibromatosis patients have a BMI ranging from 25 to over 70 percent [29].

## CONCLUSION

UFs are benign lesions that affect females during their reproductive age, peaking in the perimenopausal duration. In postmenopausal women, the chances of UFs reduces. It was once assumed that UFs would vanish with menopause, but now we know that it might persist and show as AUB. To provide suitable customized treatment, it is critical to perform a complete evaluation and rule other illnesses with comparable clinical presentations. Medical treatment of UFs may provide symptom alleviation and serve as a transition into menopause, when UFs are expected to regress.

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