Thyroid goiter and thyroid nodules are more common in women having uterine fibroids.

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Introduction

The most frequent gynecological benign tumor in premenopausal women is uterine fibroid, commonly known as myoma. Monoclonal cells from the myometrium, the smooth muscle layer of the uterus, fibroblasts, and the extracellular matrix make up the majority of it. Uterine fibroids are more common in black women, women who have an early menarche, women who use hormonal contraceptives before the age of 16, and women who have a high BMI (BMI). Compared to normal myometrium, uterine fibroids have more estrogen and progesterone receptors. Uterine fibroids are fueled by ovarian steroids, estradiol, and progesterone [1].

Women are more likely than men to get thyroid nodules. Thyroid function is influenced by estrogen, which also modulates Thyroid-Stimulating Hormone (TSH) and may play a role in the formation of thyroid nodules. Women are more likely than men to have thyroid problems. As with many autoimmune disorders, this appears to be attributable to sex variations in immune function. Anti-thyroid antibodies are seen in more than 80% of patients with thyroiditis and hypothyroidism. Thyroid autoantibodies against thyroid peroxidase have been discovered in 3% of teenage males, 7% of teenage girls, 12% of men over 80 years old, and 30% of women, according to US data.

The link between uterine fibroid and thyroid illness is poorly understood. Women who had a hysterectomy for uterine fibroids had significantly more abnormal Thyrotrophin-Releasing Hormone (TRH)/TSH stimulation test findings and anti-peroxidase antibody and/or thyroglobulin antibody results than the control group in a 1989 study. Thyroid cancer and thyroid nodules are more common in women with fibroids, according to recent research. There has been a link discovered between fibroids and overt hypothyroidism. These studies, however, had drawbacks, such as a small number of patients, a research that did not perform propensity matching despite the availability of large-scale national data, and a study that did not conduct a full study of benign thyroid illness [2].

Thyroid problems and uterine fibroids in reproductive-age women

Among reproductive-age women, uterine fibroids and thyroid nodules, both of which are influenced by estrogen, are prevalent illnesses. However, the link between the two disorders has received little attention. Subjects with uterine fibroids had a considerably higher frequency of thyroid nodules smaller than 1 cm than those without fibroids. Multiple uterine fibroids were more common in women with thyroid nodules than in women without thyroid nodules. Total triodothyronine was the only thyroid function parameter that was statistically significant, meaning that women with uterine fibroids had lower total triodothyronine levels than unaffected controls; however, total triiodothyronine levels were within normal ranges. Furthermore, there was no discernible change in thyroid hormone levels between participants with and without uterine fibroids. Thyroid nodules appear to be linked to uterine fibroids in women of reproductive age, according to our data. More research is needed to confirm this link and completely comprehend the common pathogenesis mechanism that underpins the link between uterine fibroids and thyroid nodules [3].

The most prevalent gynecologic condition in reproductive-age women is uterine fibroids, which are benign smooth muscle tumors. Abnormal uterine bleeding, pelvic pressure feelings, and reproductive dysfunction are the three types of clinical symptoms associated with fibroids. Symptomatology, the location and size of fibroids, the patient's age and reproductive demands, and the therapist's experience all play a role in determining how to treat uterine fibroids. Despite substantial research, the etiology and pathophysiology of fibroids remain a mystery. Estrogen has been shown in studies to play a key role in the creation and proliferation of uterine fibroids [4].

Thyroid nodules, like uterine fibroids, are a common occurrence in the general population. Only around 5% of these masses are reported to be cancerous, while the majorities are benign and asymptomatic. Thyroid nodules are more common in women than in males, which is notable. Estrogens have been demonstrated to affect thyroid function and the regulation of Thyroid-Stimulating Hormone (TSH) synthesis in previous research, and estrogens receptors are expressed in both normal and cancerous thyroid tissue. This shows that estrogens may have a role in thyroid nodule formation, which could lead to an increase in thyroid nodule prevalence in reproductive-age women [5].

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