

The Occurrence of Thyroid Dysfunction in PCOS Women

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DESCRIPTION

The Polycystic Ovarian Syndrome is one of the prevalent diseases that affect females who are fertile (PCOS). This age group also has a higher prevalence of thyroid problems. The purpose of this study was to examine the prevalence of thyroid dysfunction in women with PCOS in contrast to controls and the relationship between PCOS and hypothyroidism in ovulatory-age females.

The findings demonstrate a tendency for PCOS women with hypothyroidism to have a high Body Mass Index (BMI). 45% of PCOS patients had hypothyroidism, which was looked into by 35% and 10% of the TSH and T4 tests, respectively. In females with PCOS, a high level of testosterone was discovered. The change in Thyroid Stimulating Hormone is significantly correlated with the cholesterol (TSH).

Due to the shared characteristics of metabolic syndrome and the high frequency of hypothyroidism in PCOS women, there is a link between thyroid malfunction, particularly hypothyroidism, and the condition.

The Polycystic Ovarian Syndrome (PCOS), commonly known as the Stein syndrome and affecting 5–10% of females of reproductive age, is one of the common endocrinal illnesses. Infertility, hyperandrogenism, and disturbances of the menstrual cycle are the main effects of this condition. Due to increasing insulin resistance and obesity, these changes raise the risk of developing the metabolic syndrome and cardiovascular disease. The European Society for Human Reproduction and Embryology (ESHRE) and the American Society for Reproductive Medicine (ASRM), which met in Rotterdam, the Netherlands, defined the morphology of the polycystic ovary. Three key factors should be identified, according to the ESHRE/ASRM, in order to diagnose PCOS. In the event that two of these three conditions were met, the female was diagnosed with PCOS.

Irregularities in the menstrual cycle, such as anovulation (or amenorrhea), oligomenorrhoea, or a lengthy cycle 2. Clinical or physiological symptoms of hyperandrogenism include hirsutism, acne, or elevated testosterone levels 3. The main thyroid problem

is an irregular menstrual cycle and infertility, which is brought on by ovulatory dysfunction. The ovaries have a polycystic look on echographic imaging, such as Ultrasound (US), and they contain numerous tiny follicles measuring from 2 to 9 mm. The female reproductive system was severely impacted by these major dysfunctions. One of the autoimmune illnesses that can be identified when the primary malfunction that was present earlier became worse is thyroid disease. There has been talk of a possible bidirectional relationship between PCOS and thyroid, however this is still up for debate. The majority of research focused on the pathophysiological.

Diksha's research revealed that PCOS patients had higher TSH levels than healthy participants. Ding also showed that clinical hypothyroidism and depressive symptoms, such as worry, enhanced the likelihood of PCOS. Additionally, they asserted that subclinical hypothyroidism during pregnancy could result in a number of unfavourable outcomes for both the mother and the unborn child, including preterm membrane rupture and neonatal death. The authors don't go into great detail on the connection between thyroid dysfunction and polycystic ovulatory syndrome. In comparison to the control group, this study intends to assess the prevalence of thyroid dysfunctions in PCOS-affected women.

Women with PCOS who have not menstruated in the previous six months or whose cycles last more than 35 days have irregular menstruation. Testosterone levels >2.0 nmol/L or biochemical hyperandrogenism (increased androgen levels, acne, alopecia, or other androgenic patterns). After ruling out other conditions including congenital adrenal hyperplasia and virilizing tumours, transabdominal pelvic ultrasonography can detect polycystic ovaries (follicles 2-9 mm in diameter and 12 in number or ovarian volume 10 cm³).

Many symptoms and clinical characteristics, including amenorrhea, hirsutism, obesity, enlarged ovaries, and infertility, are reported by women with PCOS. It has been linked to an increase in risk factors for cardiovascular disease, including hypertension, dyslipidemia, insulin resistance, and poor glucose tolerance.

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