

Quality of life and Cardiovascular Risk in the female with Polycystic Ovary Syndrome: A Review

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Ovaries with many tiny cysts bordering or inside an ultrasound-echo-dense stroma are called polycystic ovaries. They frequently appear in female patients who exhibit no other syndrome signs. The frequency of polycystic ovaries is 21-33% in the normal community. PCOS is a hormonal disease that upsets people who are menstruation and is typically caused by an excess production of androgen, or male hormone. testosterone, a hormone associated with the male sex. Therefore in condition, the ovaries expand and create many cysts rather than a single cyst, which causes irregular, frequent, or delayed menstrual cycles that are frequently accompanied by excessive blood flow. The ovaries produce a large number of fluid-filled follicles but do not consistently release eggs. Ovaries with many tiny cysts surrounding or inside an ultrasound-echo-dense stroma are called polycystic ovaries.

In addition to having polycystic ovaries, a patient should also exhibit one or more additional symptoms, such as obesity, insulin resistance, menstrual cycle irregularities, and hyperandrogenism resulting in hirsutism and acne. Menstrual cycle disruptions and hyperandrogenism are two additional, more limiting definitions that are frequently used in North America. These definitions do not require an ultrasound finding of polycystic ovaries. They frequently appear in female patients who exhibit no other syndrome signs. In the general public, polycystic ovaries are present in 21-33% of people. The following are examples of polycystic ovarian syndrome symptoms:

- Inability to conceive as a result of irregular ovulation.
- An irregular menstrual cycle.
- An unexpected gain in weight.
- Oily skin.
- Face, chest, and back hair development is known as hirsutism.

The physical effects of the polycystic ovarian syndrome:

Metabolic syndrome: As a result of Polycystic Ovary Syndrome's alteration

of the body's normal metabolism level, the majority of overweight or obese women have the condition.

Women with Polycystic Ovary Syndrome are much more likely to experience sleep apnea, which is the halting of breathing while asleep.

The likelihood of having problems with cholesterol, high blood pressure, and blood sugar is increased by this illness.

Endometrial cancer: The middle layer of the uterus, the endometrium, thickens over time if a woman doesn't ovulate and sheds her uterus layer each month, increasing her risk of developing endometrial cancer.

Infertility: Patients with Polycystic Ovary Syndrome have difficulty getting pregnant because the regular menstrual cycle is disrupted.

Depression: Sudden hormonal changes and unwelcome hair growth have a detrimental impact on emotions and provide a breeding ground for diseases like depression.

Etiology: Although the exact cause of this condition is unknown from a medical standpoint, it is frequently linked to elevated amounts of the male hormone testosterone, which affects the normal function of the ovaries. Genes, inflammation, and insulin resistance are also connected with PCOS.

Quality of Life in Females with Polycystic Ovary Syndrome : As a hypothetical construct, QOL must be operationalized for a particular objective (Clark, 1991). The idea of QOL is that it is a general, multidimensional construct (Haywood et al., 2005) and it reflects a person's understanding of their psychological health, social and environmental integration, and the entire situation in life (Jang Y. et al., 2004; Rapley, 2003). According to Trajanovic, Skakic, and Nikolic's definition of QOL from 2007, it is a general term based on an individual's perspective and subjective experiences. It includes every prerequisite element for a happy life. The WHO outlines QOL as, 'An individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives, and about his/her goals, expectations, standards and concerns. It is a broad-ranging concept, incorporating in a complex way the person's physical health, psychological state, level of independence, social relationships, and their relationship to salient features of their environment' (WHOQOL Group, 1994).

Sense of his or her quality of life of a person is a highly subjective experience and a multifaceted notion that includes aspects of mental, physical, and social welfare. According to the World Health Organization (WHO), a person's mentality and style of living account for 60% of their quality of life. A lifestyle that promotes health includes actions that give people more control over their health, which ultimately enhances both personal and societal well-being. The foundation of long-lasting well-being is the promotion of health. Since one of the most important goals for PCOS patients is to improve their life's quality. A study on the effects of lifestyle change among PCOS patients was carried out by Clark et al. in 1998. The results exhibited that the intervention raised people's quality of life.

According to Thomson et al., (2010) Study of lifestyle and quality of life in PCOS patients, keeping energy levels moderate enhances the quality of life whereas exercising without maintaining a healthy eating regimen offers negligible benefits. The initial line of PCOS treatment is suggested to be a lifestyle change. It has been calculated that adopting an optimal lifestyle has reduced issues in 75% of PCOS patients. Quality of life is widely embraced. 'how an individual measures the decency of various parts of their life'. These assessments consist of 'people's emotional responses to life events, feelings of life satisfaction and fulfilment, and satisfaction with work and individual connections' (Diener et al., 1999). The quality of life reveals a person's well-being. Finding a definition of the quality of life is challenging (Clarke et al., 2000; Farquhar, 1995).

Smith (1973) proposed that whereas the quality of life should only apply to a person's emotional assessment of their life circumstances, wellness relates to objective living situations relating to the general public. At present, both terms are used equally (De Leo et al., 1998). These ambiguous concepts result in various ways to comprehend the quality of life (Beesley & Russwurm, 1989). Observing an economic trend in the late 1960s that placed a strong emphasis on quality of life through quantitative metrics and job rates was one of the main presumptions (Liu, 1976). Furthermore, since objective evaluation alone was insufficient to measure a person's 'quality of life,' researchers began looking into how people perceived their own lives (Andrews & Withey, 1976;).

Teenage girls with PCOS experience poor effects on their HR QoL as a result of the condition. Instead of physical functioning, emotional and social functioning seems to be most compromised. Adult women with polycystic ovarian syndrome are far more likely to have issues at home and work, lower quality of life, and changes to their perception of themselves as women (Trent, M. E. et al., 2002). Compared to adolescents without PCOS, those with PCOS have poorer HRQL. Adolescent HRQL is severely impacted by polycystic ovarian syndrome and the perceived severity of the condition. Upcoming studies are required to determine how to enhance communication between HCPs and PCOS-affected teenagers, particularly when it comes to diagnosis and the possibility of pregnancy.

Cardiovascular risk and PCOS in women

Women with PCOS who are overweight, smoke, have hypertension, dyslipidemia, subclinical vascular disease, impaired glucose tolerance, and dyslipidemia are at risk, whereas those who have metabolic syndrome and/or type 2 diabetes mellitus have a higher risk of cardiovascular disease (Wild, R. A. et al., 2010). Additionally, insulin stimulates thecal cells by activating receptors and using inositol-glycan mediators as the signal transduction method, which increases testosterone biosynthesis in PCOS women (Nestler, J. E., 1998).

Women with PCOS also had oligomenorrhea (less than six menstrual cycles in the previous year), an elevated serum-free testosterone level, and ovarian ultrasound results that were consistent with PCOS (Yeh, H. C., 1987). In a large,

community-based population receiving healthcare, diagnosed PCOS was highly prevalent and associated with noticeably higher rates of cardiovascular risk factors that varied by race/ethnicity (Lo, J. C., 2006). Cerebrovascular and cardiovascular events are more likely to occur in the postmenopausal subgroup of women who had PCOS when they were fertile (Carmina, E. 2009).

The Rotterdam General agreement Workshop group recommended in 2003 that the diagnosis of Polycystic ovary syndrome only be established when all other medical diseases that result in irregular menstrual periods and androgen excess have been ruled out. According to Glueck C.J. et al. (2003), 46% of PCOS-afflicted women also have metabolic syndrome. These elements work together to influence the PCOS patient's lipid profile. The link between metabolic syndrome and an elevated risk of developing diabetes mellitus and cardiovascular disease is widely documented (Ford, E. S. et al., 2002). Insulin resistance is a key component of PCOS (Legro, R. S. et al., 2001).

Conclusion-PCOS is a serious problem, which is increasing rapidly among women. In this, there are normally small follicles in the ovary, due to which the egg cannot be produced in females. In this, mainly the frequency change of the menstruation cycle, diabetes, mood swings, etc. are common symptoms. All this harms the quality of life of a woman. There are many risk factors for PCOS such as heredity, hormonal imbalance, cardiovascular and stress factors etc. For the treatment of PCOS, the amount of estrogen in women is increased and the amount of androgen is reduced. For this, the help of many medicines is also taken. Yoga, meditation, exercise, lifestyle change and changes in diet patterns are also effective to control this problem.

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