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Review Article

Polycystic Ovary Syndrome (PCOS)

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ABSTRACT
Polycystic ovary syndrome (PCOS) is most common problem in women which causes irregular mensural cycle. This article provide a clear view and family education on how to prevent PCOS and reduce the effects by maintain healthy life

KEYWORDS: PCOS,mensural cycle

INTRODUCTION

Polycystic Ovary Syndrome (PCOS)affects women's hormonal levels in such a way that higher-than-normal quantities of male hormones are produced. The resultant imbalance implies that the women could skip menstrual periods – and even face the difficulty of conceiving. As affirmed by Dewailly, Lujan and Carmina et al. (2014), PCOS leads further to baldness and hair growth on the body and face; besides long-term health conditions such as heart disease and diabetes. In this essay, some of the issues discussed relative to PCOS include risk factors, epidemiology, pathophysiology, the diagnosis, prevention mechanisms, and patient education.

Epidemiology: In women, PCOS affects about 5% of the population; especially those in the bracket of the reproductive age. Some of the effects of this condition include a significant increase in the rate of pregnancy-induced hypertension, gestational diabetes, endometrial cancer, dyslipidemia, and type II diabetes mellitus. In the context of the U.S., it has been observed that 80 percent of women with PCOS are likely to be experiencing obesity,with the rest of the world revealing a statistical outcome of 50 percent (McAllister, Legro, Modi& Strauss, 2015). As concurred by McGee and Strauss (2016), PCOS is also distributed based on racial or ethnic backgrounds of communities. Particularly, the latter study indicated that PCOS phenotype expression is common among South and North American women; inclusive of those from the Middle East, New Zealanders, Latinas, and Canadians. The condition has also been reported to be prevalent in groups such as South East Asians, Chinese, Europeans, Icelanders, Caribbean Hispanics, and African Americans (Naderpoor, Shorakae and de Courten et al., 2015).

Risk Factors: Some of the risk factors associated with the condition include inflammation, insulin resistance, and the role of genes. As affirmed by O'Reilly, Taylor and Crabtree et al. (2014), PCOS runs in families and, for women with insulin resistance, up to 70 percent of PCOS patients are attributed to this factor; with the cells failing to use insulin properly. Similarly, obesity has been documented as one of the leading causes of insulin resistance that, in turn, forms a predictor of PCOS. In the study by Carreau and Baillargeon (2015), the main objective was to unearth some of the symptoms with which PCOS is associated. In the findings, it was documented that the most common symptoms of the condition include hair growth, heavy bleeding, and irregular periods. Others were documented to include headaches, the darkening of the skin, male-pattern baldness, weight gain, and acne.

Diagnosis: Regarding the criteria for diagnosing PCOS, it was established that three major procedures are conducted. Firstly, it was asserted that ovaries may be polycystic when an individual experiences an increase in one or both ovaries, as well as when at least 12 follicles are present on one ovary.Similarly, the latter study suggested that PCOS is diagnosed when androgens or male hormones are in high level within the patient's blood; translating into hyperandrogenism. The third major criterion for diagnosing PCOS concerns menstrual dysfunction. As avowed by McAllister, Legro, Modi and Strauss (2015), the dysfunction is reflected by aspects such as a lack of ovulation, menstrual irregularity, and a lack of menses or periods. From the perspective of physical exams, major approaches include pelvic exams for growths, masses, and associated

abnormalities, blood tests to establish hormone levels, and the use of ultrasound to determine the thickness of uterus linings, as well as the appearance of ovaries. Additional tests are also conducted to establish possible complications. These tests include screening for obstructive sleep apnea, screening for anxiety and depression, and periodic checks focusing on triglyceride and cholesterol levels, glucose tolerance, and blood pressure (McGee & Strauss, 2016).

Treatment: Naderpoor, Shorakae and de Courten et al. (2015) sought to establish some of the treatment approaches or mechanisms for patients diagnosed with PCOS. In the findings, it was noted that the treatment focuses on the management of patients' individual concerns. The individual concerns include obesity, acne, hirsutism, and infertility. Regarding specific treatment, O'Reilly, Taylor and Crabtree et al. (2014) asserted that the approach involves medication and lifestyle changes. In relation to lifestyle changes, the study suggested that doctors could recommend patient weight loss via low-calorie diets in combination with moderate exercising. Weight loss has also been observed to help with infertility while increase the doctors' medications' effectiveness. From the perspective of medications as treatment approaches for PCOS, Anderson et al. (2014) asserted that the menstrual cycle could be regulated via progestin therapy in which patients take progestin for periods ranging from 10 to 14 days every 1-2 months. To avoid pregnancy, patients are expected to useprogestin-containing intrauterine devices or take progestin-only mini-pill. Combination birth control pills are also used to treat PCOS. Particularly, the pills contain progestin and estrogen responsible for regulating estrogen and decreasing androgen production. To help in ovulation, Carreau and Baillargeon(2015) reported that doctors recommend the use of Metformin that lowers insulin levels while improving insulin resistance, letrozole that stimulates ovaries, clomiphene, and gonadotropins.

Management: From the perspective of PCOS prevention, some studies advocate for several home and lifestyle remedies. For instance, McAllister et al. (2014) observed that PCOS could be prevented by maintaining a healthy weight (that restores ovulation while reducing androgen and insulin levels), limiting carbohydrates (that increases insulin levels while raising blood sugar more slowly), and being active to lower blood sugar levels.

Prevention: Regarding patient and family education, most of the current studies point to the need to advocate for major lifestyle alterations that promise to reduce the incidence and prevalence of PCOS. For instance, these studies point to the need to sensitize the target populations regarding the importance of home and lifestyle remedies such as the maintenance of one's weight and its predictive role in the reduction of androgen and insulin resistance while restoring ovulation, and the criticality of limiting carbohydrates. McGee and Strauss (2016) asserted that the latter family education approach is informed by the importance of the lifestyle alteration in increasing insulin levels while increasing blood sugar more slowly; pointing the need for patients to engage in physical activity.

Conclusion

Overall, the need to embrace prevention programs targeting patient populations diagnosed with PCOS cannot be overstated. Given the prevalence and the occurrence of the condition mostly on ethnic and racial grounds, it is worth acknowledging that the interventions ought to be targeted and relevant to the populations or communities on focus.From the perspective of future implications, several questions emerge. These questions include: what are the specific genetic and epigenetic causes of PCOS? Secondly, to what extent does the treatment of individuals' abnormal glucose tolerance alter maternal-fetal outcomes? Lastly, what is the role of environmental variations in shaping optimal therapy realization during interventions for PCOS patients?

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