International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 04 | April - 2024 SJIF Rating: 8.448 ISSN: 2582-3930

PCOS Challenges for Women during Puberty and after First Pregnancy

Snehal Patil
Department of Zoology, Mahendra Pratap Sharada Prasad Singh College of Arts, Commerce and Science, Bandra East, Mumbai, Maharashtra 400051.

Abstract
Polycystic Ovary Syndrome presents significant challenges for women in various aspects of their lives. Physically, women with PCOS experienced symptoms such as excess androgen, reproductive dysfunction, and metabolic complications. These metabolic complications include insulin resistance, hyperinsulinemia, and an increased risk of obesity, gestational diabetes, and cardiovascular disease. Additionally, PCOS could have wide-ranging effects on mental, emotional, and cognitive well-being, leading to increased stress levels among affected individuals. To manage PCOS and improve overall health and well-being, a multidisciplinary approach is recommended. This included the involvement of health-care professionals such as psychologists, dietitians, and exercise physiologists. This article reviews PCOS challenges for women during puberty and after the first pregnancy.

Keywords
PCOS, challenges, women, physical symptoms, excess androgen, reproductive dysfunction, metabolic complications, insulin resistance, obesity

Introduction

Polycystic ovary syndrome is the most common endocrine disorder that affects women of reproductive age. During adolescence, individuals with polycystic ovary syndrome may encounter irregularities in their menstrual cycles, excessive hair growth (hirsutism), acne breakouts, and weight fluctuations. These symptoms can have a significant impact on a woman's self-esteem and overall well-being. After the first pregnancy, women with PCOS may continue to experience hormonal imbalances, making it difficult to conceive again. Moreover, individuals with PCOS are at a higher risk for long-term health complications, including insulin resistance, cardiovascular disease, and endometrial cancer. (Martin, 2022). In addition, women with PCOS may also struggle with fertility issues, making it more difficult for them to achieve a successful pregnancy. (Hu et al., 2022). Treatment options are available to manage the symptoms of PCOS and improve overall health outcomes for women with this condition. During puberty, the symptoms of PCOS can be masked by normal pubertal changes, making it challenging to diagnose and treat (Lidaka et al., 2021). Though, it is important to recognize and address these challenges in order to provide appropriate support and care for women with PCOS during these critical stages of their development.

Challenges of PCOS during Puberty

During puberty, women with PCOS face specific challenges that can impact their physical and emotional well-being. The onset of puberty and the years after menarche can be difficult for adolescents due to a range of issues, which includes irregular menstrual cycles, hirsutism (excessive hair growth), acne, and weight gain. These symptoms have the potential to heavily impact an individual's self-esteem and body image, resulting in feelings of embarrassment, frustration, and diminished self-confidence.

After their initial pregnancy, women with PCOS may encounter ongoing hormonal imbalances that can hinder subsequent conception. These challenges can lead to increased stress, anxiety, and feelings of frustration for women with PCOS. It is crucial to acknowledge these obstacles and offer suitable assistance for individuals with PCOS during this particular phase of life. Challenges in diagnosing youth with PCOS include physiologic anovulation in

the first year postmenarche, presence of acne during puberty, and multifollicular appearance of the ovaries during adolescence (Gurnani et al., 2015).

Therefore, it is most important for health-care providers to be aware of these challenges and conduct thorough assessments in order to accurately diagnose and treat PCOS in adolescent girls and women.

Experiencing PCOS After First Pregnancy

After their first pregnancy, women with PCOS may continue to face challenges related to hormonal imbalances and fertility. These challenges can include difficulties in conceiving again, irregular menstrual cycles, and fluctuations in hormone levels. Additionally, women with PCOS may experience postpartum depression and struggles with weight management. It is essential for healthcare providers to work closely with women with PCOS after their first pregnancy to provide support, monitor hormone levels, and offer appropriate treatment options to address these challenges and promote overall health and well-being. In summary, diagnosing PCOS during puberty and after the first pregnancy can be challenging due to the overlapping symptoms with normal physiological changes (Calcaterra et al., 2021).

Impact of PCOS on Woman's Health

PCOS can have significant long-term effects on woman's health, including an increased risk of obesity, impaired glucose tolerance, type 2 diabetes, and cardiovascular disease. Additionally, PCOS can have a negative impact on fertility and obstetric outcomes, leading to difficulties in conceiving and increased risks during pregnancy. PCOS can also lead to endometrial hyperplasia and an increased risk of endometrial cancer. Overall, PCOS can have wide-ranging effects on woman's health throughout their lives, from puberty to pregnancy and beyond.

Management Strategies for PCOS

An effective approach to managing PCOS involves implementing lifestyle changes, including engage in regular physical activity and adopting a nutritious diet. In addition to these modifications, medical interventions should also be considered as part of the management plan. These interventions may include hormonal contraceptives to regulate menstrual cycles, medications to manage insulin resistance and reduce androgen levels, and fertility treatments for women trying to conceive.

In cases of PCOS during puberty, it is essential for health-care providers to conduct thorough assessments to accurately diagnose and treat the condition in adolescent girls. This may involve monitoring menstrual irregularities, hormonal imbalances, and signs of insulin resistance. Additionally, healthcare providers should provide education and support to young girls with PCOS and their families, addressing the challenges they may face and promoting self-care practices that can help manage symptoms and improve overall health.

In the case of PCOS after the first pregnancy, healthcare providers should closely monitor women's hormone levels and provide support for postpartum depression. They should also offer appropriate treatment options, such as hormonal therapies or lifestyle modifications, to address the challenges associated with PCOS after pregnancy and promote overall health and well-being for both the woman and her baby.

Navigating the Emotional Impact of PCOS

In addition to the physical challenges of PCOS, women may also experience emotional and psychological burdens. The hormonal fluctuations and physical manifestations of PCOS may contribute to emotional conditions such as anxiety, depression, and diminished self-confidence. To navigate the emotional impact of PCOS, it is important for women to receive support from healthcare providers, mental health professionals, and support groups. These resources can offer coping strategies, provide information and education about PCOS, and create a supportive community where women can share their experiences and feelings.

The Relationship Between Pregnancy and PCOS

The relationship between pregnancy and PCOS is multifaceted. On one hand, PCOS can make it more challenging for women to conceive due to irregular ovulation and hormonal imbalances. On the other hand, pregnancy can also have an impact on PCOS. During pregnancy, the hormonal changes may temporarily alleviate some of the symptoms of PCOS, such as irregular menstrual cycles. However, it is important for healthcare providers to closely monitor women with PCOS during pregnancy, as they may still be at an increased risk for gestational diabetes and other pregnancy complications.

Advancements in PCOS Treatment Options

New research and medical interventions have offered more targeted approaches to managing PCOS symptoms, such as hormonal therapies, insulin sensitizers, and lifestyle modifications. These advancements have led to improved outcomes and quality of life for women with PCOS. However, there is still a need for further research and understanding of the psychological impact of PCOS, as well as the most effective treatment strategies for mental health support in women with PCOS (Cowan et al., 2023).

Lifestyle Changes to Combat PCOS Symptoms

Women with PCOS are recommended to maintain a healthy diet, engage in regular exercise, manage stress levels, and prioritize adequate sleep. These lifestyle changes can help regulate hormones, improve insulin resistance, and reduce symptoms such as weight gain and acne. Furthermore, lifestyle changes can also support overall physical and mental well-being, as PCOS is often associated with higher rates of anxiety, depression, and poor body image. Women with PCOS may face challenges in managing their symptoms during puberty, as the hormonal imbalance interferes with ovulation and increases the risk of infertility (Saadati et al., 2021). Women with PCOS also face challenges after their first pregnancy, as the hormonal changes and potential weight gain during pregnancy can worsen PCOS symptoms. During these times, it is crucial for women diagnosed with PCOS to collaborate closely with healthcare professionals in order to create a comprehensive treatment strategy that comprises changes in lifestyle, medication, and psychological assistance. (Brindha & M, 2019).

Creating Awareness about PCOS in Women

Creating awareness about PCOS in women is crucial to ensure early detection, timely intervention, and appropriate management. Healthcare professionals play a crucial role in educating women about the various manifestations of PCOS, emphasizing its potential effects on both physical and mental well-being. By increasing awareness, women can seek timely medical intervention and receive the necessary support to manage their condition effectively. Women with PCOS need multidisciplinary support that includes psychological, dietetic, and exercise physiology services (Pirotta et al., 2021).

This multidisciplinary approach can help address the physical, mental, emotional, cognitive, and social barriers that women with PCOS face in managing their condition, ultimately improving their overall well-being and quality of life.

Conclusion

To effectively manage PCOS, a comprehensive approach that includes lifestyle modifications, medication, and psychological support is necessary. It is recommended that women with PCOS engage in mental consultation sessions and participate in support groups, alongside other drug treatments, to improve their satisfaction with their lives and their adaptation with their condition. Additionally, multidisciplinary services such as psychological, dietetic, and exercise physiology are essential to address the different barriers to PCOS management.

Moreover, healthcare systems should strive to provide integrated and coordinated care, making it easier for women with PCOS to access the support and services they need. This can help improve the overall well-being and mental health of women with PCOS, leading to better management of the condition and ultimately improving their quality of life.

References

1. Martin, C. (2022). Is magnetic resonance imaging useful in the diagnosis of polycystic ovary syndrome in adolescents?. F&S Reports, 3(2), 92.
2. Hu, M., Zhang, Y., Lu, Y., Han, J., Guo, T., Cui, P., ... & Billig, H. (2023). Regulatory mechanisms of HMGB1 and its receptors in polycystic ovary syndrome-driven gravid uterine inflammation. The FEBS Journal, 290(7), 1874-1906.
3. Lidaka, L., Bekere, L., Rota, A., Isakova, J., Lazdane, G., Kivite-Urtane, A., ... & Gailite, L. (2021). Role of single nucleotide variants in FSHR, GNRHR, ESR2 and LHCGR Genes in adolescents with polycystic ovary syndrome. Diagnostics, 11(12), 2327.
4. Gurnani, M., Birken, C., & Hamilton, J. (2015). Childhood obesity: causes, consequences, and management. Pediatric Clinics, 62(4), 821-840. https://doi.org/10.1016/j.pcl.2015.04.001
5. Calcaterra, V., Verduci, E., Cena, H., Magenes, V. C., Todisco, C. F., Tenuta, E., ... & Zuccotti, G. (2021). Polycystic ovary syndrome in insulin-resistant adolescents with obesity: the role of nutrition therapy and food supplements as a strategy to protect fertility. Nutrients, 13(6), 1848.
6. Cowan, S., Lim, S., Alycia, C., Pirotta, S., Thomson, R., Gibson-Helm, M., ... & Moran, L. (2023). Lifestyle management in polycystic ovary syndrome–beyond diet and physical activity. BMC endocrine disorders, 23(1), 14.
7. Saadati, N., Haidari, F., Barati, M., Nikbakht, R., Mirmomeni, G., & Rahim, F. (2021). The effect of low glycemic index diet on the reproductive and clinical profile in women with polycystic ovarian syndrome: A systematic review and meta-analysis. Heliyon, 7(11).
8. Brindha, G., & Madhanshankar. (2019, May 28). Comparison between dietary intake and age in relation to body mass index among polycystic ovarian syndrome women – a case–control study. Asian J Pharm Clin Res, Vol 12, Issue 7, 2019, 248-251.
9. Pirotta, S., Joham, A. E., Moran, L. J., Skouteris, H., & Lim, S. S. (2021). Implementation of the polycystic ovary syndrome guidelines: A mixed method study to inform the design and delivery of a lifestyle management program for women with polycystic ovary syndrome. Nutrition & Dietetics, 78(5), 476-486.
10. Hoeger, K. M., Dokras, A., & Piltonen, T. (2021). Update on PCOS: consequences, challenges, and guiding treatment. *The Journal of Clinical Endocrinology & Metabolism*, *106*(3), e1071-e1083.
11. Sir-Petermann, T., Codner, E., Pérez, V., Echiburú, B., Maliqueo, M., Ladron de Guevara, A., ... & Bhasin, S. (2009). Metabolic and reproductive features before and during puberty in daughters of women with polycystic ovary syndrome. *The Journal of Clinical Endocrinology & Metabolism*, *94*(6), 1923-1930.
12. Welt, C. K., & Carmina, E. (2013). Lifecycle of polycystic ovary syndrome (PCOS): from in utero to menopause. *The Journal of Clinical Endocrinology & Metabolism*, *98*(12), 4629-4638.
13. Bellver, J., Rodríguez-Tabernero, L., Robles, A., Muñoz, E., Martínez, F., Landeras, J., ... & Group of interest in Reproductive Endocrinology (GIER) of the Spanish Fertility Society (SEF). (2018). Polycystic ovary syndrome throughout a woman's life. *Journal of assisted reproduction and genetics*, *35*, 25-39.
14. Noroozzadeh, M., Ramezani Tehrani, F., Bahri Khomami, M., & Azizi, F. (2017). A comparison of sexual function in women with polycystic ovary syndrome (PCOS) whose mothers had PCOS during their pregnancy period with those without PCOS. *Archives of sexual behavior*, *46*, 2033-2042.
15. Bronstein, J., Tawdekar, S., Liu, Y., Pawelczak, M., David, R., & Shah, B. (2011). Age of onset of polycystic ovarian syndrome in girls may be earlier than previously thought. *Journal of pediatric and adolescent gynecology*, *24*(1), 15-20.
16. Franceschi, R., Gaudino, R., Marcolongo, A., Gallo, M. C., Rossi, L., Antoniazzi, F., & Tatò, L. (2010). Prevalence of polycystic ovary syndrome in young women who had idiopathic central precocious puberty. *Fertility and sterility*, *93*(4), 1185-1191.
17. Ibanez, L., Jaramillo, A., Enriquez, G., Miro, E., Lopez-Bermejo, A., Dunger, D., & de Zegher, F. (2007). Polycystic ovaries after precocious pubarche: relation to prenatal growth. *Human Reproduction*, *22*(2), 395-400.

18. Elenis, E., Desroziers, E., Persson, S., Sundström Poromaa, I., & Campbell, R. E. (2021). Early initiation of anti-androgen treatment is associated with increased probability of spontaneous conception leading to childbirth in women with polycystic ovary syndrome: a population-based multiregistry cohort study in Sweden. *Human Reproduction*, *36*(5), 1427-1435.
19. Witchel, S. F., Teede, H. J., & Peña, A. S. (2020). Curtailing pcos. *Pediatric research*, *87*(2), 353-361.
20. Valent, A. M., & Barbour, L. A. (2021). Management of women with polycystic ovary syndrome during pregnancy. *Endocrinology and Metabolism Clinics*, *50*(1), 57-69.