

Polycystic Ovarian Syndrome: Literature Review

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Polycystic ovarian syndrome is referred to as PCOS. This involves the endocrine system and is common in women during their reproductive years. The most prevalent symptoms tend to be infertility and amenorrhea. Amenorrhea stands for the absence of menses, otherwise known as a women's menstrual cycle (Capriotti, 2020). It is essential in women's healthcare to be adequately screened for this condition if symptoms arise. The purpose of this literature review is to understand how PSCO affects women. Many factors play a role in how a woman's life could be affected by this condition—women who experience PCOS deal with several changes that other women do not.

Exploratory study of a screening measure for polycystic ovarian syndrome, quality of life assessment, and neuropsychological evaluation

The article demonstrates how women with PCOS differ from women who do not. Physical, emotional, and spiritual aspects were evaluated. 120 women between the age of 18 to 42 years old from Indiana Wesleyan University were studied (Boivin et al., 2020). The goal was to compare women who were negative for PCOS to women who have been diagnosed with the condition. Multiple charts were created that demonstrated the different assessments that were done to illustrate the differences.

Key Points

The first screening utilized Foley Polycystic Ovarian Syndrome, which consisted of twelve different categories. These categories tested the woman's overall risk for developing PCOS. The higher the number, the higher the risk, which could require further screening (Boivin et al., 2020). Out of the 120 women, 86 of them tested negative when screened using the FPOS. The 86 women were then compared to those who were medically diagnosed with PCOS. The methods used for analysis included the PCOS Quality-Of-Life Scale, Zung self-rating depression scale, The State-Trait Anxiety Inventory, Fatigue symptom inventory, Bottomley social support scale, Spiritual beliefs inventory, Automated Neuropsychological Assessment Metric, and Bilateral Field Advantage task of interhemispheric brain integration (Boivin et al., 2020). Overall, the findings concluded that the women who had PCOS tested drastically lower in multiple screening areas than the women who did not have PCOS. Therefore, the overall quality of life for women who deal with PCOS is lower physically, emotionally, socially, and spiritually (Boivin et al., 2020). The article firmly states that comprehensive psychosocial and neurocognitive support is just as important as the current standard of medical care regarding women who have PCOS (Boivin et al., 2020).

Assumptions

The article mentions that the group tested that had PCOS was smaller than the group that did not. Even though it was not an even number of women on both sides, it was implied that the results reflect valid information. The article addressed the fact that the findings are only in the early stages of research (Boivin et al., 2020). More studies need to be done to further the evidence and validity of the information. The study done was meant to help promote the knowledge and screening of women who deal with PCOS.

Deficit/Conclusion

The point of the article was to bring more awareness to the implications of PCOS. There is more to the condition and how it affects a woman. The findings were clear that women who had this condition scored lower in multiple categories that affect day-to-day life. It is crucial to be aware of these implications because they can affect many patients. The article concluded that the point was to show the importance of screening women for reasons such as their cognitive performance, how women with PCOS handle life emotionally, and how the quality of their day-to-day life is affected (Boivin et al., 2020). This is critical for the proper treatment of patients who have been diagnosed. The condition is known for primarily being associated with infertility and affecting the woman's menstrual cycle. However, the article made it clear through evidence that there is more to the condition in how it can affect patients with PCOS. Broadening the knowledge of the disease and its implications could impact the patient's care and overall quality of life.

Serum Fetuin-A levels are increased and associated with insulin resistance in women with polycystic ovary syndrome

The article covers a study that demonstrates whether or not women with PCOS are more likely to have higher levels of circulating Fetuin-A, which is associated with insulin resistance and type 2 diabetes mellitus (Liu et al., 2020). The reason for this study is due to the lack of knowledge on the correlation of these factors. It has been found that it is a common characteristic for women with PCOS to be insulin resistant (Liu et al., 2020). This study intends to hopefully provide a way of diagnosing women with PCOS if they have high levels of circulating Fetuin-A

(Liu et al., 2020). Bar graphs were used in this article to demonstrate each factor. This helps provide a great visual for the research being done.

Key Points

The goal of this article was to understand a biomarker that reflects a potential metabolic disorder and insulin resistance in patients who have PCOS (Liu et al., 2020). Early detection is essential for treatment options. However, diagnosing PCOS can be lengthy and hard to catch in the early stages. The study was done on one hundred and twenty-two women with PCOS and eighty-five women who did not have PCOS (Liu et al., 2020). It was concluded that the women who had PCOS had higher levels of Alpha-2-Heremans-Schmid glycoprotein, which is also known as circulating Fetuin-A (Liu et al., 2020). Even though the knowledge behind why circulating Fetuin-A levels are higher is unknown, it has now been shown to directly correlate with insulin resistance, a characteristic of PCOS.

Assumptions

The study that was done was only to be taken as a base of hopefully further studies. Nevertheless, it shed some light on a potential aspect to detect if a woman has PCOS. The case only utilized women who were younger (Liu et al., 2020). Therefore, it is hard to assume that the results would equally affect older women. Also, the article mentioned that the results were not meant to show the causal relationship between the occurrence of insulin resistance and PCOS in regards to increased circulating Fetuin-A levels (Liu et al., 2020). The study's goal was to demonstrate whether or not circulating Fetuin-A levels was higher in women with PCOS due to its correlation with insulin resistance and type 2 diabetes. This was found to be accurate, even though the direct correlation could not be fully determined.

Deficit/Conclusion

The information provided in this article could become very beneficial to the healthcare community. PCOS is one of the most common diseases of women's endocrine and metabolic systems (Liu et al., 2020). Therefore, more research and case studies being done could positively affect a large population of women. Out of the women who have been diagnosed with PCOS, 70% of them are affected by insulin resistance (Liu et al., 2020). This study helped shed some light on the potential biomarker for women with PCOS. Circulating Fetuin-A is a biomarker that indicates insulin resistance. Therefore, since 70% of women experience insulin resistance, circulating Fetuin-A could be the biomarker for potentially diagnosing women with PCOS. The fallback of this study is that more studies need to be done surrounding the relationship between Fetuin-A in regards to insulin resistance in PCOS. The other implication is that they did not include a broad range of age groups even though they had many participants. Overall, this information could be highly beneficial for the healthcare community to be aware of. I believe it is studies like this that could help improve overall patient care. The knowledge from this study could help with the early detection of PCOS in women who have insulin resistance.

The effect of probiotics, prebiotics, and synbiotics on hormonal and inflammatory indices in women with polycystic ovary syndrome: a systematic review and meta-analysis

This article studies the potential positive effects of women who have been diagnosed with PCOS taking probiotics, prebiotics, and synbiotics. The study was conducted 13 times with 855 women with PCOS (Shamasbi, S. G., 2019). PCOS has no known leading cause (Shamasbi, S. G., 2019). Therefore, the goal of this study was to hopefully find a solution to help with inflammatory and hormonal indicators in concerns to this syndrome.

Key Points

This study was conducted to answer questions involving significant implications of PCOS. The hormonal indicators tested were dehydroepiandrosterone sulfate, testosterone, Free Androgen Index, and sex hormone-binding globulin (Shamasbi, S. G., 2019). Then the inflammatory indicators evaluated were malondialdehyde, nitric oxide, high sensitive C-reactive protein, total glutathione, and total antioxidant capacity (Shamasbi, S. G., 2019). The third aspect that was studied involved the women's hirsutism score, which looks at hair growth. Prebiotics are suitable for combating harmful bacteria with good bacteria, probiotics are ideal for balancing the microbes within the intestines, and lastly, synbiotics improve the efficacy of the pre/probiotics (Shamasbi, S. G., 2019). The article highlighted the multitude of potential benefits of taking these supplements. Both pre/probiotics have excellent anti-inflammatory properties. The conclusion was that the reduction of Free Androgen Index and malondialdehyde and increased sex hormone-binding globulin and nitric oxide resulted from probiotics and synbiotics controlling the hormonal and inflammatory indicators (Shamasbi, S. G., 2019). This was the most significant result from the study done. Early diagnosis is essential for minimizing symptoms by utilizing treatment options such as pre/probiotics and synbiotics.

Assumptions

The article mentioned that the study was conducted in Iran, except for one. Therefore, more studies need to be completed in other countries to ensure efficacy for PCOS patients (Shamasbi, S. G., 2019). The article mentioned that there should be little to no effect involving the environment. However, race, ethnicity, and climate could affect the hormonal and inflammatory indicators (Shamasbi, S. G., 2019). Nevertheless, the results were promising in helping women with PCOS symptoms. More studies must be conducted to provide a broader

range of results. More studies could result in helping to find a more specific type of pre/probiotic, length of use, and dose (Shamasbi, S. G., 2019).

Deficit/Conclusion

The results that came from this study were very beneficial to the women who struggle with PCOS. This condition takes a toll on women's mental health, as well as physical. Most treatment options for polycystic ovarian syndrome involve surgery or pharmacotherapy, which consists of some risk and is more invasive (Shamasbi, S. G., 2019). The study was conducted to shed some light on a more natural treatment option that offers decreased complications. Lifestyle changes could improve a woman's day-to-day life when having PCOS. I fully commend the researchers who conducted this study. The information found from this study is so valuable. It could help open up more studies to further the knowledge on the effects of these supplements involving PCOS. A lot of treatment options only solve what they are made to fix. Those options can also come with more risks and complications. The benefits of pre/probiotics and synbiotics have more health benefits than just what they were studied in this article. The significant implication was that it needs to be explored on a broader range of people. The article mentioned that hopefully, more studies can be done throughout other areas of the world. The findings from this study could genuinely benefit patient care. Inflammation and hormonal indicators could pose many uncomfortable problems for women who deal with PCOS. Studies like this could help the medical field promote a less complicated and natural approach to lessening PCOS symptoms.

Conclusion

Polycystic ovarian syndrome affects many women all over the world. This literature review was meant to bring knowledge and awareness towards a condition that affects so many. The more studies conducted, the more information the medical community can have, positively

impacting the patients. The first article mentioned all the overall factors that affect women with PCOS. This was an important aspect to include in this literature review because it provided a complete understanding of what it is like to live with PCOS. Awareness could come from the article discussed because it provided statistical evidence involving a women's quality of life. The finding from this article showed that women with PCOS have a lower quality of life emotionally, socially, physically, and spiritually (Boivin et al., 2020). The second article found that women with PCOS have higher levels of circulating Fetuin-A, which is associated with insulin resistance in PCOS (Liu et al., 2020). The purpose of this study was to find out if this could be an indicator for women to be diagnosed with PCOS. The last article mentioned a less complicated approach to treating inflammation and hormonal indicators in regards to PCOS. Utilizing pre/probiotics and synbiotics could help lower inflammation and hormonal indicators (Shamasbi, S. G., 2019). PCOS affects so many women in different ways. The best way for medical professionals to help their patients who experience this condition is to be understanding. Also, continually learning from new research and case studies. More and more studies are being done to hopefully make day-to-day life more comfortable for women with PCOS. This information can help the nursing practice because it brings valuable ways to improve the treatment plans and patient care. All of the articles listed demonstrated their study with helpful charts to make it easier to understand. The information on the graphs allows the reader to visually understand the research and its results from a quantitative perspective. Healthcare is continuously improving for patient care. These articles bring a new way to look at a condition that has affected many women for years. More efficient and high-quality care can come from the knowledge of the research articles mentioned. Overall, the literature review demonstrated in-depth information on a very prevalent condition known as a polycystic ovarian syndrome.

References

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