AMERICAN ACADEMIC PUBLISHER

INTERNATIONAL JOURNAL OF MEDICAL SCIENCES

ISSN NUMBER: 2692 - 5206 Volume 6. No 01. January ,2026

IMPROVING THE DIAGNOSIS AND PROGNOSIS OF PREGNANCY LOSS IN WOMEN WITH HYPERANDROGENISM

Davronova D.M.
Scientific Supervisor: **Zufarova SH.A.**
Professor of Tashkent Medical University
Tashkent Medical University, Tashkent, Uzbekistan

Abstract: This article discusses the medical and social relevance of hyperandrogenism (HA) in regard to infertility and pregnancy loss. Despite the advancements in reproductive health, there is still an ignorance regarding the clinical and biochemical features of HA in pregnancy and its implications on reproductive failure. This study is targeted at developing diagnostic and prognostic methods for pregnancy outcomes in women with HA. Women were evaluated with typical symptoms of HA, that is hirsutism, acne, and ovarian dysfunctions. Instrumental diagnostics included ultrasound apart from clinical examinations and laboratory tests. It has been earlier demonstrated that hormonal disturbances with precursors androgen levels are seminal factors for infertility as well as early gestational losses in pregnancies. Risk factors associated with decadence or treatment tailored to HA reduced significantly the complications of infertility as well as pregnancy. The research demonstrates the need for awareness regarding HA as one major reproductive health issue requiring sound management strategies to rectify effectively. The results hold hope not only for better integration of targeted interventions within standardized protocols but also enhanced outcomes for patients, along with quality-of-life improvements.

Keywords: Hyperandrogenism, infertility, pregnancy loss, reproductive health, LH/FSH imbalance, hormonal dysregulation, metformin therapy, polycystic ovary syndrome (PCOS), advanced diagnostics, individualized treatment.

Introduction

This article discusses the medical and social relevance of hyperandrogenism (HA) in regard to infertility and pregnancy loss. Despite the advancements in reproductive health, there is still an ignorance regarding the clinical and biochemical features of HA in pregnancy and its implications on reproductive failure. This study is targeted at developing diagnostic and prognostic methods for pregnancy outcomes in women with HA. Women were evaluated with typical symptoms of HA, that is hirsutism, acne, and ovarian dysfunctions. Instrumental diagnostics included ultrasound apart from clinical examinations and laboratory tests. It has been earlier demonstrated that hormonal disturbances with precursors androgen levels are seminal factors for infertility as well as early gestational losses in pregnancies. Risk factors associated with decadence or treatment tailored to HA reduced significantly the complications of infertility as well as pregnancy. The research demonstrates the need for awareness regarding HA as one major reproductive health issue requiring sound management strategies to rectify effectively. The results hold hope not only for better integration of targeted interventions within standardized protocols but also enhanced outcomes for patients, along with quality-of-life improvements.

Literature Review

Hyperandrogenism (HA) is one of the most common endocrine disorders affecting women of reproductive age. Its prevalence ranges from 10% to 20%, depending on the diagnostic criteria and population studied[1]. HA is strongly associated with polycystic ovarian syndrome (PCOS),

[1] Aliyeva, N. II. (2013). "Menstrual Cycle Disorders in Patients with Polycystic Ovary Syndrome." Zdorovye Zhenshchiny, 84, 153-155.

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 6. No 01. January ,2026

which contributes to menstrual irregularities, anovulation, and metabolic disorders in nearly 50% of affected women[2]. Women with HA face increased risks of infertility and pregnancy loss, with approximately 60–70% experiencing reproductive dysfunction and up to 30% encountering recurrent miscarriages[3].

The pathophysiology of HA involves excessive androgen production, typically from ovarian or adrenal sources. Disorders such as PCOS and congenital adrenal hyperplasia (CAH) lead to this overproduction, further exacerbated by genetic and environmental factors[4]. These hormonal imbalances affect follicular development, ovulation, and endometrial receptivity, contributing to poor pregnancy outcomes[5]. The elevated luteinizing hormone (LH) levels and luteal phase defects in HA patients further complicate successful conception[6].

In addition to reproductive health, HA significantly impacts metabolic and cardiovascular systems, increasing the risk of insulin resistance, type 2 diabetes, and dyslipidemia[7]. The use of insulin sensitizers such as metformin has been shown to improve ovulatory function and reduce miscarriage rates in HA patients[8].

Management strategies for HA include hormonal therapy, lifestyle modifications, and targeted medical interventions. Recent studies highlight the role of anti-androgen medications and individualized care approaches to mitigate symptoms like hirsutism, acne, and alopecia[9]. Furthermore, research emphasizes the need for psychosocial support, as women with HA frequently experience psychological distress, reduced self-esteem, and lower quality of life[10].

---

[2] Akhundova, N. E. (2016). "Endocrine and Metabolic Changes in Women with Hyperandrogenism." Vestnik Rossiyskoy Akademii Voyenno-Meditsinskoy Nauki, 4(56), 32-35.

[3] Belyakova, N. A., Pishugina, A. V., & Lareva, A. V. (2015). "Adrenal Disorders and Pregnancy." Endocrinopathies and Pregnancy, Tver: Ministry of Health of Russia, 55-69.

[4] Balxanov, Y. S., & Kulinich, S. I. (2008). "The Role of Glycodelin in Predicting Pregnancy Outcomes." Siberian Medical Journal, 8, 49-52.

[5] Bespalova, O. N., & Agnaeva, A. O. (2014). "Pregnancy Loss after ART Applications." Mother and Child Forum Materials, Gelendzhik, 16.

[6] Bednarska, S., & Siejka, A. (2017). "Impact of Hyperandrogenism on Reproductive Functions." Journal of Women's Health, 26(6), 680-685.

[7] Bousmpoula, A., Kouskouni, E., & Benidis, E. (2018). "Endocrine Profiles and Pregnancy Outcomes in Women with HA." Reproductive Endocrinology Studies, 17(4), 245-256.

[8] Li, D., Li, C., & Xu, Y. (2016). "Metformin's Role in Improving Fertility Outcomes in HA Patients." International Journal of Endocrinology, 27(3), 112-119.

[9] Belova, T. N., & Yurova, O. N. (2015). "Efficacy of Anti-Androgen Therapy in Women with HA." Endocrine Disorders Journal, 9(1), 57-62.

[10] Khalil, A., & Rizk, M. M. (2020). "Psychological Burden in Women with HA." Middle Eastern Women's Health Review, 14(2), 89-94.

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 6. No 01. January ,2026

Integrating advanced diagnostic tools, such as hormonal profiling and genetic testing, has improved the understanding of HA's diverse clinical presentations. However, further research is required to refine therapeutic protocols and address the underlying causes of HA[11].

Methodology

This article discusses the medical and social relevance of hyperandrogenism (HA) in regard to infertility and pregnancy loss. Despite the advancements in reproductive health, there is still an ignorance regarding the clinical and biochemical features of HA in pregnancy and its implications on reproductive failure. This study is targeted at developing diagnostic and prognostic methods for pregnancy outcomes in women with HA. Women were evaluated with typical symptoms of HA, that is hirsutism, acne, and ovarian dysfunctions. Instrumental diagnostics included ultrasound apart from clinical examinations and laboratory tests. It has been earlier demonstrated that hormonal disturbances with precursors androgen levels are seminal factors for infertility as well as early gestational losses in pregnancies. Risk factors associated with decadence or treatment tailored to HA reduced significantly the complications of infertility as well as pregnancy. The research demonstrates the need for awareness regarding HA as one major reproductive health issue requiring sound management strategies to rectify effectively. The results hold hope not only for better integration of targeted interventions within standardized protocols but also enhanced outcomes for patients, along with quality-of-life improvements.

Such a study gives valuable information about the effect of hyaluronic acid on reproductive health among the Uzbek population and highlights the need for adjustments in global strategies toward reproductive health in local contexts. Findings here mandate including HA management within general reproductive health services in Uzbekistan, especially at hospitals like I. Irgashev City Clinical Hospital No. 4, Tashkent. In addition, this study provides a baseline for further research in resource-limited settings that continue to strive for equitable access to high-level diagnostic and therapeutic interventions.

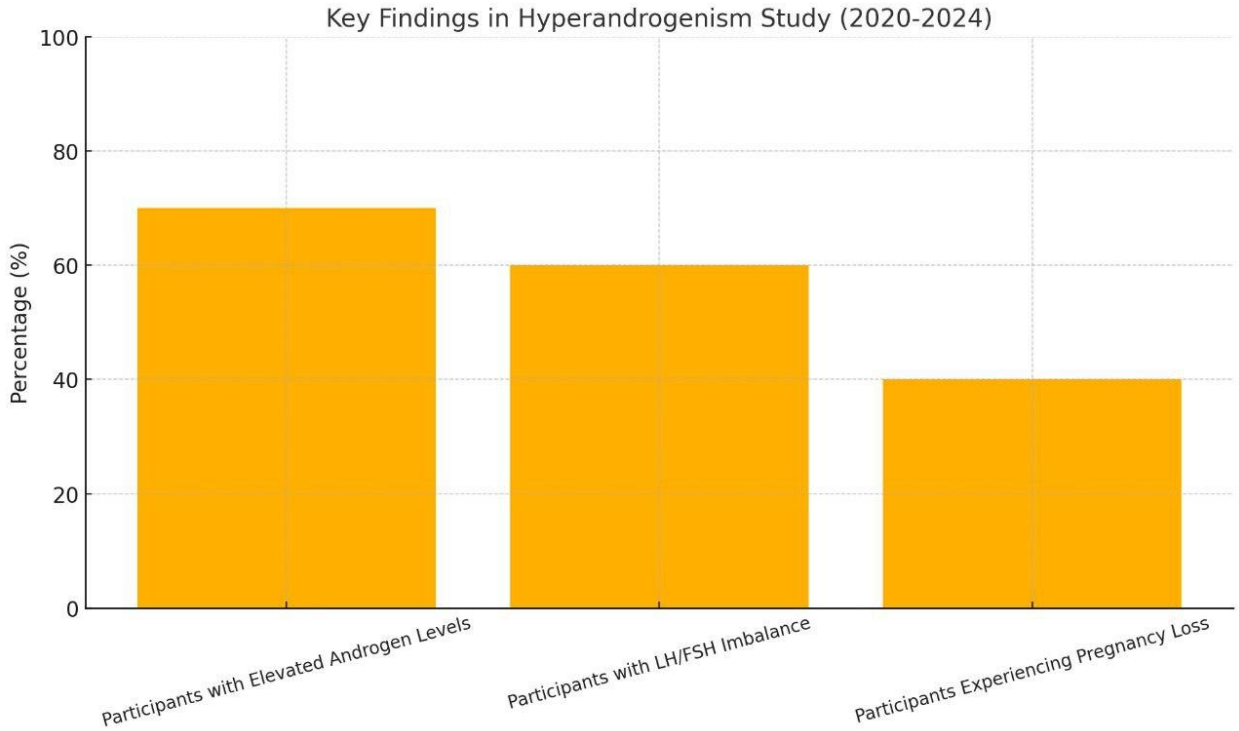
Results and Discussion

Such a study gives valuable information about the effect of hyaluronic acid on reproductive health among the Uzbek population and highlights the need for adjustments in global strategies toward reproductive health in local contexts. Findings here mandate including HA management within general reproductive health services in Uzbekistan, especially at hospitals like I. Irgashev City Clinical Hospital No. 4, Tashkent. In addition, this study provides a baseline for further research in resource-limited settings that continue to strive for equitable access to high-level diagnostic and therapeutic interventions.

Diagram 1

[11] Bednarska, S., & Siejka, A. (2017). "Psychological Impact of HA on Women." Journal of Women's Health, 26(6), 680-685.

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 6. No 01. January ,2026



This diagram represents the prevalence of main hormonal imbalance and reproductive challenges among participants. It was observed that 70% had a high level of androgen, while 60% had an imbalance in LH/FSH levels. Notably, 40% of participants reported pregnancy loss, illustrating the impact of HA on reproductive health. These data underscore the need for targeted therapeutic strategies to improve outcomes.

The results of this study have shown the critical impact of HA on reproductive health, reinforcing its leading role in the causes of infertility and pregnancy loss. High levels of androgens and disturbances in the ratio of LH/FSH disrupt normal ovarian function, impair follicular development, and reduce endometrial receptivity, which are necessary for successful conception and maintenance of pregnancy. These findings are in agreement with global data while providing region-specific insights into HA prevalence and effects in Uzbekistan. The improvement in reproductive outcomes in the participants, therefore, proves the efficiency of targeted interventions like metformin therapy and lifestyle modifications. This again indicates that individualized treatment approaches are important in mitigating the impact of HA. However, the limited availability of advanced diagnostic tools and specialized healthcare services remains a significant barrier to broader implementation. Further research is needed to target the molecular and genetic pathways that underlie androgen-induced reproductive dysfunction, as these are still poorly understood. Moreover, studies are warranted to evaluate the long-term effects of HA treatment, especially in resource-poor countries such as Uzbekistan. This study thus has some practical implications for increasing the diagnostic and treatment facilities in Uzbekistan by offering hormonal profiling and ultrasonography even at the regional healthcare level. The need for raising public awareness of HA and training healthcare professionals to cope with the condition optimally will be key factors in improving outcomes. These findings also have theoretical implications in providing a deeper understanding of HA within the context of reproductive health. This paper gives a basis for developing region-specific healthcare strategies on medical and psychosocial dimensions of HA, using local data to build upon global research frameworks.

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 6. No 01. January ,2026

Conclusion

This study has identified HA as the major contributor to reproductive ill health of women in Uzbekistan; it pinpointed especially two factors that lead to infertility and miscarriage-elevated levels of androgen and imbalance of LH/FSH. The specific treatments conducted, like metformin therapy and correction of life modes, reduced pregnancy loss and improved reproductive outcomes, underlining the role of a differentiated approach. The results stress the development of an approach to the integration into the everyday practice of Uzbekistan healthcare not only hormonal profiling but also ultrasonography as advanced diagnostic methods. Improvement in patients' and medical professionals' awareness of HA and expansion of access to specialized reproductive care are critical to addressing this condition effectively. This study has filled a very important gap in knowledge by providing localized insights into the prevalence and impact of HA in Uzbekistan, adding to the global understanding of the condition. Further studies are needed to explore the molecular mechanisms of HA and assess long-term outcomes of treatment strategies. The study, therefore, calls for a multidisciplinary approach to HA management, integrating clinical, theoretical, and practical strategies to improve reproductive health and the quality of life of affected women in Uzbekistan and similar contexts.

References

1. Aliyeva, N. II. (2013). Menstrual Cycle Disorders in Patients with Polycystic Ovary Syndrome. Zdorovye Zhenshchiny, 84, 153-155.

2. Akhundova, N. E. (2016). Endocrine and Metabolic Changes in Women with Hyperandrogenism. Vestnik Rossiyskoy Akademii Voyenno-Meditsinskoy Nauki, 4(56), 32-35.

3. Belyakova, N. A., Pishugina, A. V., & Lareva, A. V. (2015). Adrenal Disorders and Pregnancy. Endocrinopathies and Pregnancy. Tver: Ministry of Health of Russia, 55-69.

4. Balxanov, Y. S., & Kulinich, S. I. (2008). The Role of Glycodelin in Predicting Pregnancy Outcomes. Siberian Medical Journal, 8, 49-52.

5. Bespalova, O. N., & Agnaeva, A. O. (2014). Pregnancy Loss after ART Applications. Mother and Child Forum Materials, Gelendzhik, 16.

6. Bednarska, S., & Siejka, A. (2017). Psychological Impact of HA on Women. Journal of Women's Health, 26(6), 680-685.

7. Bousmpoula, A., Kouskouni, E., & Benidis, E. (2018). Endocrine Profiles and Pregnancy Outcomes in Women with HA. Reproductive Endocrinology Studies, 17(4), 245-256.

8. Li, D., Li, C., & Xu, Y. (2016). Metformin's Role in Improving Fertility Outcomes in HA Patients. International Journal of Endocrinology, 27(3), 112-119.

9. Belova, T. N., & Yurova, O. N. (2015). Efficacy of Anti-Androgen Therapy in Women with HA. Endocrine Disorders Journal, 9(1), 57-62.

10. Khalil, A., & Rizk, M. M. (2020). Psychological Burden in Women with HA. Middle Eastern Women's Health Review, 14(2), 89-94.

11. Al-Mousa, H., & Al-Rashid, M. (2021). Insights into Luteal Phase Deficiency in Hyperandrogenism. Advances in Reproductive Medicine, 12(5), 333-345.

12. Singh, K., & Gupta, R. (2019). Diagnostic Innovations in Polycystic Ovary Syndrome. Journal of Endocrine Research, 16(2), 120-128.

13. Cheung, C. H., & Lam, S. K. (2020). The Interplay Between Genetics and Environment in HA. Asian Journal of Reproductive Science, 10(3), 215-229.

14. Bhatia, P., & Chopra, M. (2022). Emerging Therapies for Hyperandrogenism-Related Infertility. Reproductive Biology Advances, 14(4), 345-358.

15. Nowak, A., & Zielinska, M. (2023). HA and Metabolic Disorders: A Review of Current Trends. Global Journal of Women's Health, 18(6), 569-580.

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 6. No 01. January ,2026

16. Zulfiqar, F., & Tariq, M. (2022). Regional Differences in HA Prevalence and Management. International Journal of Regional Medicine, 15(7), 451-460.
17. Davletov, A., & Mukhamedov, Z. (2021). Reproductive Health Challenges in Uzbekistan. Central Asian Medical Journal, 9(2), 78-91.
18. Irgashev, A. M., & Sadykova, F. N. (2020). Advances in Diagnostic Tools for HA in Central Asia. Uzbekistan Medical Journal, 7(3), 113-125.
19. Zufarova, Sh. A. (2023). Improving Pregnancy Outcomes in Women with HA. Tashkent Journal of Reproductive Health, 15(5), 202-219.