

## TUXUMDON POLIKISTOZ SINDROMI BILAN OG'RIGAN AYOLLARDA D VITAMINI YETISHMOVCHILIGINING GORMONAL VA METABOLIK BUZILISHLARGA TA'SIRI

Rasulova Muxlisa Madaminjon qizi<sup>1</sup>, Xalimova Nargiza Yusufovna<sup>1</sup>

<sup>1</sup> Toshkent davlat tibbiyot universiteti, Toshkent 100125, O'zbekiston

Rasulova Muxlisa Madaminjon qizi [rasulovamuxlisa666@gmail.com](mailto:rasulovamuxlisa666@gmail.com), <https://orcid.org/0009-0000-8476-3408>

**Dolzarbli:** Tuxumdon polikistoz sindromi reproduktiv yoshdagi ayollarda eng ko'p uchraydigan endokrin kasalliklardan biri bo'lib, giperandrogeniya, ovulyator disfunksiya va insulin rezistentligi bilan kechadi. So'nggi yillarda D vitamini yetishmovchiligining ushbu sindrom patogenezidagi o'rni alohida ahamiyat kasb etmoqda. Tadqiqotlarda D vitamini yetishmovchiligi insulin rezistentligi, gormonal disbalans va reproduktiv buzilishlar bilan bog'liqligi ko'rsatilgan.

**Tadqiqot maqsadi:** Tuxumdon polikistoz sindromi bilan og'rigan ayollarda D vitamini darajasining gormonal va metabolik ko'rsatkichlarga ta'sirini baholash.

**Tadqiqot materiallari va usullari:** Tadqiqotda tuxumdon polikistoz sindromi tashxisi qo'yilgan 18 nafar ayolning klinik-laborator ko'rsatkichlari tahlil qilindi. Bemorlarda yosh, tana vazni indeksi, qondagi D vitamini, insulin, testosteron, estradiol, prolaktin, follikulostimullovchi va luteinlovchi gormon ko'rsatkichlari o'rganildi. Shuningdek, ultratovush tekshiruv natijalari baholandi.

**Natijalar va muhokama:** Tadqiqot natijalariga ko'ra, bemorlarning o'rtacha yoshi 25,2 yoshni, tana vazni indeksi esa 26,6 kg/m<sup>2</sup> ni tashkil etdi. Qondagi D vitamini darajasi o'rtacha 24,9 ng/ml bo'lib, bemorlarning 53,8% ida D vitamini yetishmovchiligi aniqlandi. Insulinning o'rtacha qiymati 15,2 mkXB/ml, testosteronning o'rtacha ko'rsatkichi esa 2,3 ng/ml ni tashkil etdi.

D vitamini darajasi pasaygan bemorlarda insulin va testosteron ko'rsatkichlari yuqoriroq ekanligi kuzatildi. Bu holat D vitamini yetishmovchiligi insulin rezistentligi va giperandrogeniya rivojlanishida muhim omillardan biri bo'lishi mumkinligini ko'rsatadi. Shuningdek, D vitamini darajasi past bo'lgan bemorlarda tana vazni indeksining ham yuqoriroq bo'lish tendensiyasi kuzatildi.

Korrelyatsion tahlil natijalariga ko'ra, D vitamini va insulin ko'rsatkichlari o'rtasida teskari bog'liqlik aniqlandi ( $r=-0,41$ ). Bundan tashqari, D vitamini va testosteron darajalari o'rtasida ham manfiy korrelyatsiya qayd etildi ( $r=-0,36$ ). Ushbu natijalar D vitamini yetishmovchiligi metabolik va gormonal buzilishlar bilan bog'liq ekanligini tasdiqlaydi.

Ultratovush tekshiruvlarida bemorlarning aksariyatida tuxumdonlarning polikistik o'zgarishlari, follikulalar sonining ortishi va stromal zichlashuv kuzatildi. Olingan natijalar adabiyotlarda keltirilgan ma'lumotlar bilan mos kelib, D vitamini tuxumdon faoliyati va steroidogenez jarayonlarida muhim rol o'ynashini ko'rsatadi..

**Xulosalar:** Tuxumdon polikistoz sindromi bilan og'rigan ayollarda D vitamini yetishmovchiligi keng tarqalgan bo'lib, u gormonal va metabolik buzilishlar bilan bog'liq hisoblanadi. D vitamini darajasini nazorat qilish va korreksiya qilish metabolik hamda reproduktiv ko'rsatkichlarni yaxshilashga yordam berishi mumkin. Kelgusida kengroq klinik tadqiqotlar o'tkazish maqsadga muvofiq hisoblanadi.

## THE EFFECT OF VITAMIN D DEFICIENCY ON HORMONAL AND METABOLIC DISORDERS IN WOMEN WITH POLYCYSTIC OVARY SYNDROME

Rasulova Mukhlisa Madaminjon qizi<sup>1</sup>, Khalimova Nargiza Yusufovna<sup>1</sup>

<sup>1</sup> Tashkent State Medical University, Tashkent 100125, Uzbekistan

[rasulovamuxlisa666@gmail.com](mailto:rasulovamuxlisa666@gmail.com), <https://orcid.org/0009-0000-8476-3408> (R.M.M.),  
[xalimova78@gmail.com](mailto:xalimova78@gmail.com), <https://orcid.org/0009-0008-9850-9249> (Kh.N.Y.)

### Abstract

Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders in women of reproductive age and is associated with hyperandrogenism, ovulatory dysfunction, and insulin resistance. In recent years, increasing attention has been paid to the role of vitamin D deficiency in the pathogenesis of PCOS. The aim of this study was to evaluate the effect of vitamin D levels on hormonal and metabolic parameters in women with PCOS. The study included 18 women diagnosed with PCOS. Clinical and laboratory parameters, including body mass index, serum vitamin D, insulin, testosterone, estradiol, prolactin, follicle-stimulating hormone, and luteinizing hormone levels were analyzed. Ultrasound examination findings were also assessed. The mean age of the patients was 25.2 years, while the average body mass index was 26.6 kg/m<sup>2</sup>. The mean serum vitamin D level was 24.9 ng/ml, and vitamin D deficiency was identified in 53.8% of patients. Patients with lower vitamin D levels demonstrated higher insulin and testosterone concentrations. Correlation analysis revealed a negative association between vitamin D and insulin levels ( $r=-0.41$ ), as well as between vitamin D and testosterone levels ( $r=-0.36$ ). Ultrasound examination confirmed polycystic ovarian morphology in the majority of patients. The findings suggest that vitamin D deficiency may contribute to hormonal and metabolic disturbances in women with PCOS. Monitoring and correction of vitamin D levels may improve metabolic and reproductive outcomes in affected patients.

### Key words:

Polycystic ovary syndrome, Vitamin D deficiency, Insulin resistance, Hyperandrogenism, Hormonal imbalance, Metabolic disorders, PCOS