CLINICAL AND BIOCHEMICAL CHARACTERISTICS OF BLOOD DONORS WITH DISTINCT SEROLOGICAL PROFILES OF HEPATITIS B AND C VIRUSES

Usmonaliyeva Bahora Vafokulovna
basic doctoral student
Center for the Development of Professional Qualification of Medical Workers (Tashkent, Uzbekistan)
Ubaydullaeva Zukhra Ibragimovna
DSc, Professor
Center for the Development of Professional Qualification of Medical Workers (Tashkent, Uzbekistan)
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ABSTRACT

In this study, the diagnostic significance of ultrasound parameters of the ovaries in girls with polycystic ovary syndrome was assessed. 150 girls aged 16-25 were examined, who were divided into two clinical groups with developing polycystic ovary syndrome and a control group of healthy individuals. All participants underwent ultrasound examination of the pelvic organs, determining the volume of the ovaries, the number of antral follicles, morphometric and stromal characteristics, as well as assessing the specific ultrasound signs of polycystic transformation.

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The study results showed that in girls with polycystic ovary syndrome, a significant increase in ovarian volume, an increase in the total number of antral follicles, and pronounced stromal changes were noted compared to the control group ($p<0.05$). The most characteristic ultrasound signs were the peripheral arrangement of follicles in a "cercle" pattern, thickening of the ovarian capsule, and increased echogenicity of the stroma. The severity of ultrasound changes was more pronounced in patients with a combination of hormonal and metabolic disorders. Correlation analysis revealed a statistically significant correlation between ovarian ultrasound parameters and hormonal-metabolic markers, in particular, between the level of antimuller hormone and the number of antral follicles, as well as between insulin resistance and ovarian volume ($p<0.05$). The obtained data confirm the high diagnostic value of ultrasound in identifying early forms of polycystic ovary syndrome and justify its use in the

comprehensive diagnosis of this condition.

Conclusions:

The clinical and biochemical parameters of blood donors with different serological profiles of hepatitis B and C viruses demonstrate multidirectional changes, with the most pronounced biochemical alterations observed in donors with active HBV infection and in individuals with "high-risk" latent serological profiles.

HBsAg-negative but anti-HBc–positive donors exhibit moderate, predominantly subclinical changes in transaminase levels, which are significantly more pronounced in the absence of anti-HBs. This finding suggests the possibility of minimal ongoing infectious activity even in the absence of classical markers of active hepatitis.

The identified association between alanine aminotransferase levels and HBV serological markers confirms the diagnostic value of an integrated clinical and biochemical assessment of blood donors and substantiates the relevance of incorporating biochemical parameters into the interpretation of latent forms of viral hepatitis in routine donor screening practice.

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