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**ТИББИЁТДА ЯНГИ КУН  
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NEW DAY IN MEDICINE**

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**DEVELOPMENT OF ANEMIA AS AN ADVERSE EVENT OF COMBINED ANTIVIRAL THERAPY IN PATIENTS WITH CHRONIC VIRAL HEPATITIS C**

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✓ *Resume*

*Currently, the standard of care for chronic hepatitis C is antiviral combination therapy (CVTT) using pegylated interferon-alpha (peg-ELISA- $\alpha$ ) and ribavirin. However, a serious problem with combination antiviral therapy (CPVT) is the rather frequent development of severe adverse events. The appearance of changes in the peripheral blood jeopardizes the patient's condition and requires urgent modification of therapy, up to its complete cancellation, which in both cases is the limiting factor in achieving a sustainable virological response.*

*Key words: CVHC, CVVT, anemia, undesirable effect*

**РАЗВИТИЕ АНЕМИИ КАК НЕЖЕЛАТЕЛЬНОЕ ЯВЛЕНИЕ КОМБИНИРОВАННОЙ ПРОТИВОВИРУСНОЙ ТЕРАПИИ У БОЛЬНЫХ С ХРОНИЧЕСКИМ ВИРУСНЫМ ГЕПАТИТОМ С**

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✓ *Резюме*

*В настоящее время стандартом лечения ХВГС является комбинированная противовирусная терапия (КВПТ) с применением пегилированного интерферона-альфа (пег-ИФА- $\alpha$ ) и рибавирин. Однако, серьезной проблемой комбинированной противовирусной терапией (КПВТ) остается довольно частое развитие тяжелых нежелательных явлений. Появление изменений со стороны периферической крови ставит под угрозу состояние пациента и требует срочной модификации терапии, вплоть до полной ее отмены, что в обоих случаях является лимитирующим фактором достижения устойчивого вирусологического ответа.*

*Ключевые слова: ХВГС, КПВТ, анемия, нежелательное действие.*

**SURUNKALI VIRUSLI GEPATIT C BILAN OG'RIGAN BEMORLARDA KOMBINATSIYALANGAN VIRUSGA QARSHI TERAPIYA O'TKAZISHDA NOJO'YA HOLAT SIFATIDA ANEMIYANING RIVOJLANISHI**

*Nurullaeva Dilnoza Fatullayevna*

Buxoro davlat tibbiyot institute

✓ *Rezyume*

*Hozirgi vaqtda surunkali gepatit C ni davolash standarti pegilirlangan interferon-alfa (peg-IFA- $\alpha$ ) va ribavirin yordamida antiviral kombinatsiyalangan terapiya (KVQT) hisoblanadi. Shu bilan birga, kombinatsiyalangan antiviral terapiya bilan bog'liq jiddiy muammo - bu og'ir noxush hodisalarning tez-tez rivojlanishi. Periferik qondagi o'zgarishlarning paydo bo'lishi bemorning ahvolini xavf ostiga qo'yadi va terapiyani to'liq bekor qilishgacha shoshilinch ravishda o'zgartirishni talab qiladi, bu ikkala holatda ham barqaror virusologik javobga erishishda cheklovchi omil hisoblanadi.*

*Kalit so'zlar: CVHC, CVVT, anemiya, kiruvchi ta'sir.*

### Relevance

According to the World Health Organization, the number of patients infected with viral hepatitis C in the world is about 210 million people, which is about 3% of the world's population. According to estimates, the possible prevalence of this disease in our country is up to 1.5%. This viral infection acquires a chronic course in 80% of cases, which leads to an almost inevitable increase in pathological processes in the liver, the outcome of which in most cases is liver cirrhosis and (or) hepatocellular carcinoma.

**Purpose.** To study and systematize the data available in modern literature on the incidence of anemia in patients with chronic viral hepatitis C on the background of combined antiviral therapy.

### Material and methods

An analysis of the current literature on the effect of combined antiviral therapy on the development of anemia in patients with chronic viral hepatitis C was carried out. 42 scientific literature of local and foreign researchers was studied.

### Results and discussion

Anemia is one of the main adverse events of CPVT that worsens the quality of life of patients. A decrease in hemoglobin levels leads to shortness of breath, increased fatigue, a decrease in exercise tolerance, and exacerbates the course of coronary artery disease.

There are several points of view regarding the mechanisms of development of CPVT-associated anemia in patients with CVHC, however, it is generally accepted that the main role in the development of anemia is assigned to the action of ribavirin, more precisely, the ability of ribavirin metabolites to accumulate in erythrocytes, reducing their life expectancy. According to various authors, anemia occurs with different frequency during combined antiviral therapy. So, N. K. Sarkisyants et al. consider anemia to be a group of infrequent adverse events, the frequency of which is less than 25% of cases [1]. According to the research results of D. V. Dontsov et al. out of 224 patients who had indications for CPVT, anemia was found to develop in 37.5% of patients [2]. And in the large-scale IDEAL study, a decrease in Hb levels below 10 g / dl was observed in 23.2-28.1%, below 8.5 g / dl - in 2.1-3, 8% of patients, which required a reduction in the dose of ribavirin or the appointment of erythropoiesis stimulants [3]. Research by Hung CH et al. demonstrated more frequent development of anemia in CPVT: out of 466 patients, severe anemia (<10 g/dl) developed in total in 183 (39.2%) patients [4]. In modern literature, there are data that the incidence of anemia against the background of CPVT can reach even more than 50%. For example, M. Khalid et al. a study of 400 patients with chronic hepatitis C revealed anemia in 70% of patients [5]. Similar data were obtained by I. O. Ivanikov et al. in a study of 48 patients diagnosed with chronic hepatitis C, the researchers found the development of anemia in 75% of patients during the use of CPVT. Conclusions Thus, The modern literature contains numerous and heterogeneous data on the incidence of anemia in patients with chronic viral hepatitis C on the background of combined antiviral therapy. Most authors agree that CPVT affects peripheral blood parameters and, to a greater extent, hemoglobin levels, but there is still no consensus on this issue.

### Conclusion

There are also heterogeneous data on changes in the KPVT scheme with the development of adverse events. Therefore, this issue remains relevant and requires further study. There are also heterogeneous data on changes in the KPVT scheme with the development of adverse events. Therefore, this issue remains relevant and requires further study. There are also heterogeneous data on changes in the KPVT scheme with the development of adverse events. Therefore, this issue remains relevant and requires further study.

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