

HEMOGRAM CHANGES IN POSTKOVID SYNDROME IN PREGNANT WOMEN

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ABSTRACT

The health of pregnant women is one of the most urgent medical and social problems not only in Uzbekistan, but throughout the world. In 2021, the incidence of Covid-19 among pregnant women worldwide was 3,500,000, and the number of deaths was 12,300. (worldometer.info).

Material and methods. Clinical material for the study was obtained from the data of general blood tests of 26 pregnant women who were treated with post-covid syndrome in the department of pathology of pregnant women of the Multidisciplinary Clinic of the Tashkent Medical Academy in 2021. The age of the patients is 19–39 years, the mean age is 26.59 ± 1.62 years. We studied the amount of hemoglobin in the general blood test, the total number of red blood cells.

Results. Pregnant women were divided into 3 groups depending on the stage of fetal development. In patients, the level of hemoglobin, the total number of erythrocytes, platelets and leukocytes, and the erythrocyte sedimentation rate were determined.

Conclusion. Thus, the depletion of hemoglobin and red blood cells was several times higher in pregnant women with severe Covid-19 than in those who did not have it. In summary, the largest proportion of pregnant patients aged 19-25 years. Group II, the second trimester of pregnancy, was reported in 46% of patients. In terms of hemoglobin and erythrocyte counts, moderate anemia was detected in 61,34 of patients with thrombocytopenia in 42%.

Key words: pregnancy, coronavirus, anemia, complications, thrombocytopenia.

INTRODUCTION

The World Health Organization has designated the 2019-2020 coronavirus epidemic as a pandemic and an international health emergency. Covid-19 infection

is an infectious disease that causes severe acute respiratory distress syndrome, the course of which in pregnant women leads to an increase in the number of various serious complications and disabilities not only in the mother but also in the child. In 2021, the incidence of Covid-19 in pregnant women worldwide was 3,500,000 and the number of deaths was 12,300 (worldometer.info). Globally, maternal mortality is estimated at 15-20% of the world's population [11]

Independent Chinese biologists have reported that SARS-CoV-2 attacks hemoglobin in erythrocytes. Moscow, April 17 (Itar-Tass) - Covid-19, which causes tissue oxygen starvation, is said to have an active effect on hemoglobin metabolism, "pulling out" iron from it, thereby increasing its ability to replicate. In this case, hypoxia occurs, ie damage to the lungs by coronavirus is caused not only by the presence of too many viruses, but also by the fact that the virus "absorbs all the iron" in hemoglobin. found that the erythrocyte count decreased several-fold. Russian media have suggested that the virus infects hemoglobin, which leads to leukemia, not Covid-19 pneumonia [6,7]

Thrombocytopenia and thrombocytopathy are now considered to be a complication of COVID-19. The disease is caused by irregular and excessive use of anticoagulants, antiplatelet drugs and fibrinolytic drugs due to impaired platelet aggregation, adhesion and retraction [2].

Common blood test for all diseases is the most common laboratory test and an important laboratory test used to obtain information about the physicochemical properties of blood [7].

Pregnancy anemia is one of the global problems of the modern healthcare system today, especially obstetrics and gynecology. Pregnancy anemia is consistently at the forefront of a number of extragenital pathologies in pregnant women. According to the WHO, more than 2 billion people (more than 30% of the population) worldwide suffer from iron deficiency anemia (IHD), most of them women and children. In 90% of cases in pregnant women, anemia is iron deficiency [1].

The prevalence of anemia in developed countries is 8-20%, while in less developed countries it reaches 80%. Complications during pregnancy: risk of natural abortion in 20-42% of cases, risk of premature birth in 11-42% of cases, preeclampsia in 30-50% of pregnant women with TTK, chronic placental insufficiency, delayed placental growth (25%), premature placental abruption (25-35%), fetal hypoxia, arterial hypotension (40%) [1,12]

As oxygen consumption increases by 15-33% during pregnancy, dystrophic changes develop not only in the uterus and placenta, but also in the myocardium, leading to pregnancy and childbirth complications [10].

Anemia with a sharp drop in iron levels in the late stages of pregnancy causes fetoplacental insufficiency not only in the mother's blood, but also in the placenta against the background of tissue hypoxia, which increases the risk of premature birth by 11-42% [4].

With chronic anemia, the function of the placenta is impaired, and its trophic, metabolic, and gas exchange functions change. Insufficient iron accumulation in the antenatal period is one of the causes of iron deficiency and anemia in infants [5,13].

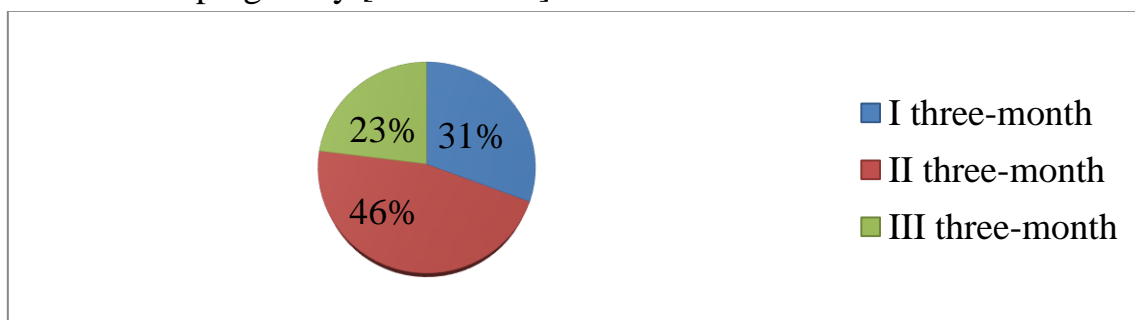
Hemogram control in pregnant women who performed Covid-19. Check total Hb, erythrocytes, color scores, white blood cells and trombocytes and evaluate the result. Determine at what stage of pregnancy the incidence of coronavirus is high.

MATERIALS AND METHODS.

The clinical material for the study was obtained from the data of the general blood test in the medical history of 26 pregnant women who were treated in the pathology department of pregnant women of the multidisciplinary clinic of the Tashkent Medical Academy during 2021. The age of patients was 19-39 years, the average age was 26, 59 ± 1.62 years. The amount of hemoglobin in the general blood test, the total number of red blood cells, the color index, the total number of white blood cells and platelets were studied. Pregnant women are divided into 3 groups as pregnancy progresses. Group I is 1-three months gestation, group II is 2-three months gestation and group III is 3-three months gestation.

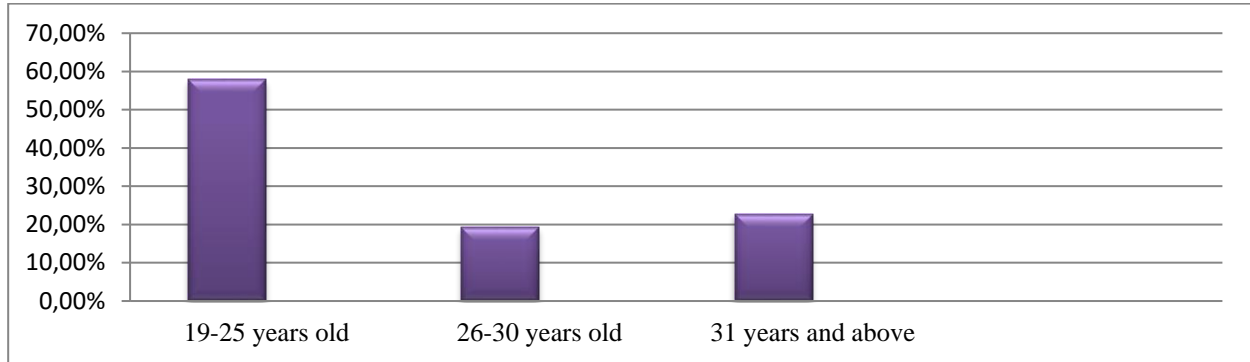
RESULTS AND DISCUSSIONS.

Pregnant women are divided into 3 groups as pregnancy progresses. Group I was observed in 8 patients with 1 to three months of pregnancy, group II in 12 patients with 2 to three months of pregnancy and group III in 6 patients with 3 to three months of pregnancy [Picture - 1].



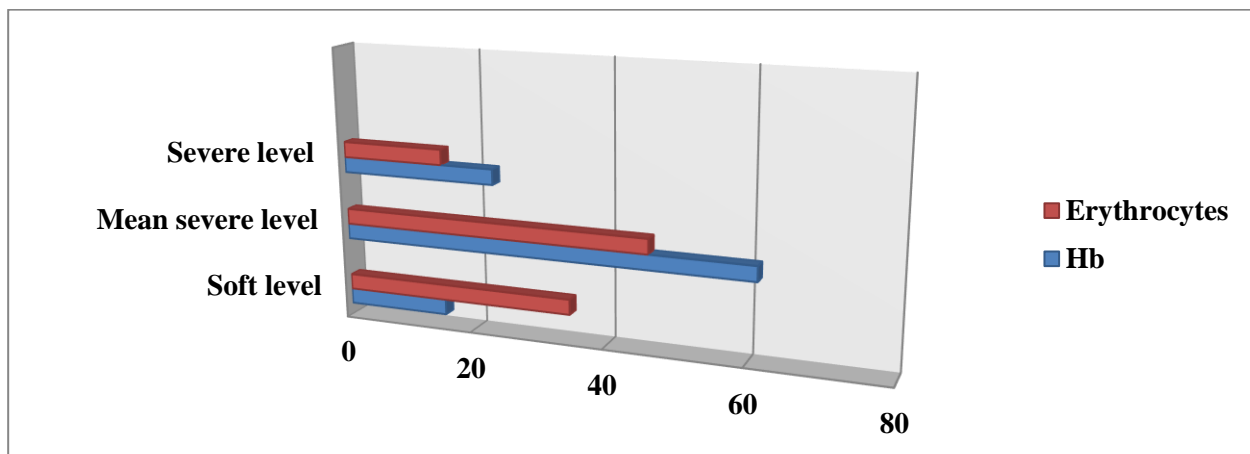
Picture - 1. Periodic distribution of pregnancies with postcovid syndrome

The number of pregnant patients aged 19 to 25 years - 15 (58%), the number of patients aged 26 to 30 years - 5 (19.23%), the number of pregnant patients aged 31 years and older - 6 (22, 77%) [Picture 2].



Picture-2. Age distribution of pregnant women with postcovid syndrome.

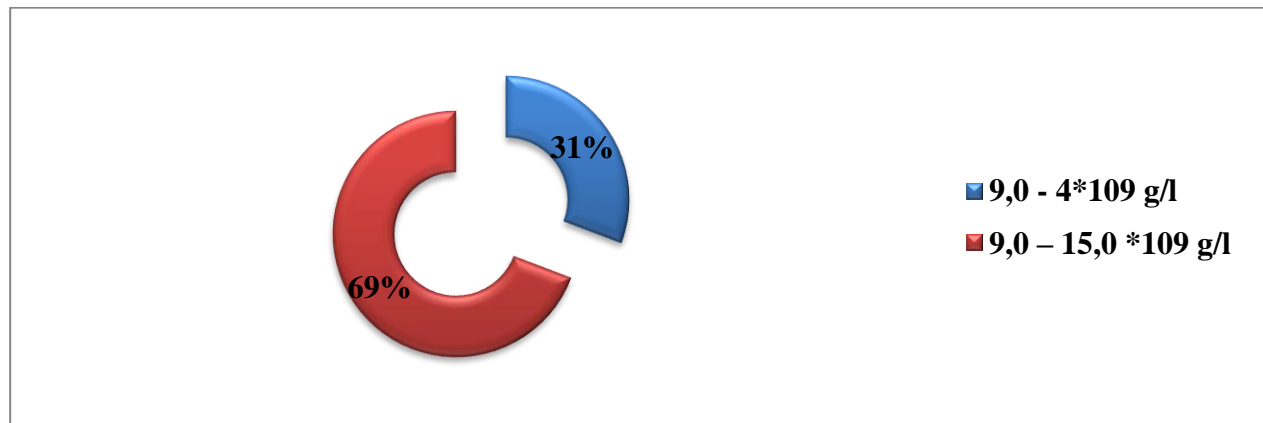
When studying the levels of anemia in patients, the number of patients with mild anemia, ie hemoglobin content > 90g / l - 4 (15.38%), moderate anemia, ie hemoglobin level 90 - The number of patients up to 71g / l - 16 (61.34%), the number of patients with severe anemia, ie hemoglobin 70g / l and less - 6 (23.28%) formed. Number of patients with erythrocyte count up to $3.0 \cdot 10^{12}$ g / l - 9 (34.62%), number of patients with $3.0 - 2.6 \cdot 10^{12}$ g / l - 12 (46, 15%), the number of patients with $2.5 \cdot 10^{12}$ g / l and less - 4 (15.38%) [Picture. 3].



Picture-3. In pregnant women with postcoid syndrome Hb and erythrocyte size poverty levels

The number of patients with a color index from 0.7 to 0.8 - 17 (65.38%), the number of patients from 0.8 to 0.9 - 9 (34.62%) they.

The total number of leukocytes from 9.0 to $15.0 \cdot 10^9$ g / l - 18 (69.23%), the number of patients from 9.0 to $4 \cdot 10^9$ g / l - 8 (30.77%) [Picture - 4]



Picture-4. Distribution of patients with postcoid syndrome by total number of white blood cells

When studying the total number of platelets, the number of patients with $180.0 * 10^9 \text{ g / l} - 15$ (57.69%), the number of patients with $180.0-150.0 * 10^9 \text{ g / l} - 8$ (30.77%), and patients with less than $100.0 * 10^9 \text{ g / l}$ were found to have 3 (11.54%).

CONCLUSIONS.

1. The number of pregnant women aged 19-25 years is 15.
2. Group II, i.e. 2-three months gestation, was recorded in 46% of patients
3. According to the number of hemoglobin and red blood cells, 61.34% of cases of patients with an average severe level of weakness, that is, with a hemoglobin content of 90 to 71 g/l, were recorded.
4. 69.23% of patients with a total number of white blood cells $9.0-15.0 * 10^9 \text{ g/l}$ were identified.
5. Thrombocytopenia was detected in 42% of patients.

REFERENCES

1. Atadjanyan A.S. Anemiya u beremennix: kliniko-patogeneticheskie podxodi k vedeniyu beremennosti //Jurnal akusherstva i jenskix bolezney. – 2017. – T. 66. – № 5. – S. 56–63. Doi: 10.17816/JOWD66556-63
2. Babadjanova SH.A., Kurbanova Z.CH., Muminov O.A. Laboratorniy monitoring patologii koagulyasionnogo gemostaza u bolnix Covid-19 //Teoreticheskoy i klinicheskoy meditsini. – 2021. №5. S. 149-151.
3. Belotserkovseva L.D., Budanov P.V. Проблемы эффективности терапии железodefitsitnoy anemii u beremennix // Вопросы гинекологии, акушерства i perinatologii. – 2012. – № 11(3). – С. 80–85.

4. Burlev V.A., Konovodova E.N., Ordjonikidze N.V., i dr. Lechenie beremennix s latentnim defitsitom jeleza // Rossiyskiy vestnik akushera-ginekologa. – 2006. – № 1. – S. 64–68.

5. Dvoretzkiy L.I., Zaspas E.A., Litvitskiy P.F., i dr. Svobodnoradikalnie protsessi u bolnix jelezodefitsitnoy anemiei na fone lecheniya preparatami jeleza // Terapevticheskiy arxiv. – 2006. – № 1. – S. 52–57.

6. Kurbanova Z.CH., Babadjanova SH.A., Muminov O.A. Chastota tromboembolicheskix oslojneniy u bolnix s koronavirusnoy infeksiy //Teoreticheskoy i klinicheskoy meditsiny. – 2021. №5. S. 149-151.

7. Kurbanova Z.CH., Babadjanova SH.A., Muminov O.A., Tojiboeva D.A., Xodjaniyazova D.M., Xushbokova G.U. Retrospektivniy analiz pokazateley krovi u bolnix koronavirusnoy infeksiy // Kardiorespiratornix issledovaniy . – 2021. №1.1. S. 30.

8. Peresada O.A., Kotova G.S., Solonko I.I. Jelezodefitsitnaya anemiya pri beremennosti //Meditsinskie novosti. – 2013. – № 2. – S. 6–12.

9. Sorokina A. Anemiya u beremennix // Vrach. – 2015. – № 5. – С. 65–70.

10. Taypurova A.M. Jelezodefitsitnaya anemiya beremennix: metodicheskie rekomendatsii / red. E.K. Aylamazyan. – SPb.: Izd-vo N-L, 2008. –35 с.

11. Fayzullaeva N.I. Sovremennie kliniko - gemastozilogicheskie aspekti vedeniya beremennosti i rodov u jenshin s idiopaticeskoy trombositopenicheskoy purpuroy. Toshkent. 2016.

12. Levy A, Fraser D, Katz M, et al. Maternal anemia during pregnancy is an independent risk factor for low birthweight and preterm delivery. Eur J ObstetGynecolReprod Biol. 2005;122(2):182-6. Doi: 10.1016/j.ejogrb.2005.02.015.

13. Patra S, Pasrija S, Trivedi S. Maternal and perinatal outcome in patients with severe anemia in pregnancy. Intern J Gynecol Obstet. 2005;91(2):164-5doi: 10.1016/j.ijgo.2005.07.008.