

## THE IMPORTANCE OF DIAGNOSING PLATELET PATHOLOGIES AND DVS SYNDROME IN PREGNANT WOMEN

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### Abstract

The care and study of medical and social problems of the health status of women of reproductive age is the most important task of the state and public health. These problems need to be addressed nationwide, but at the same time, specific tasks to improve their health should be identified and addressed within each region, taking into account the actual situation on the ground [22,1,9,12].

Platelet pathologies and DVS syndrome that occur during pregnancy threaten not only the mother, but also the child's organism. Reduces the quality of life, reduces life expectancy, increases the number of disabilities and directly affects the sociological position of society.

**Keywords:** DVS syndrome, hemostasis, pregnancy, thrombocytopenia, thrombocytopathy, bleeding.

### Introduction

#### The relevance of the problem.

The increase in morbidity among women of reproductive age, in particular during pregnancy, has been particularly alarming in recent years, as it leads to an increase in the number of various diseases and dangerous complications in both the mother and the child being born [2,22,7]. A huge number of studies conducted both in Uzbekistan and abroad have been devoted to the study of issues related to the features of hemostasis during pregnancy, which is primarily due to the increased risk of maternal and perinatal death and disability in the group of patients with certain abnormalities in the regulation of blood aggregation [18,9]. DIC syndrome (disseminated intravascular coagulation, consumption coagulopathy, thrombohemorrhagic syndrome) is a pathological nonspecific process characterized by the formation of disseminated blood clots (fibrin, erythrocyte and hyaline) in the vessels of the microcirculatory system in combination with blood clotting, leading to multiple massive hemorrhages. It may be asymptomatic or in the form of an acutely

developed coagulopathy. It is often found in various obstetric pathologies, various types of shock, severe injuries, and bacterial sepsis. Bleeding occupies a leading place in the structure of causes of maternal mortality worldwide, accounting for 13 to 25%. Despite the fact that the dynamics of maternal mortality rates in Uzbekistan has a clear downward trend [14,11,4], the structure of causes is identical to those in developing countries: bleeding, septic complications. The decrease in maternal mortality is mainly due to a decrease in the number of deaths after complications of childbirth, while the decrease in the frequency of obstetric bleeding in the structure of maternal mortality is extremely slow [7,12]. In recent years, hemostasis disorders have become particularly relevant due to their increasing occurrence and worsening course under the influence of various pathological processes and environmental factors [6]. The causes of hemostasis disorders are quite diverse, platelet pathology occupies not the least place among them, which is the cause of bleeding in almost 80% of cases [9]. During pregnancy, a woman's body experiences physiological changes in the hemostasis system associated with the appearance of the uteroplacental circulatory system. As the gestation period progresses, changes occur in all parts of the blood coagulation system aimed at preparing women for possible complications during pregnancy, childbirth, and the early postpartum period [22, 10]. Changes in general hemodynamics in the body of a pregnant woman play an important role in the activation of the hemostasis system. With a physiologically occurring pregnancy, changes in the hemostasis system occur in proportion to the gestation period. These changes are a physiological adaptation and have 2 main functions – maintaining the normal functioning of the fetoplacental complex and stopping bleeding from the placental site after separation of the placenta [7]. For the normal functioning of the fetoplacental system in conditions of high blood coagulation, compensatory and adaptive mechanisms are activated: the number of small-caliber terminal villi with hyperplasia and peripheral capillaries increases, the thickness of the placental barrier decreases with thinning of the syncytium, syncytiocapillary membranes and syncytial nodules are formed [3, 22, 13]. Activation of the hemostasis system during pregnancy creates a premorbid background for thrombohemorrhagic complications. Hemostasis disorders increase the risk of severe bleeding during childbirth and cesarean section. During surgical interventions against the background of thrombocytopenia and thrombocytopathy (even with careful stopping of bleeding), bleeding, including delayed bleeding, is possible. The same is observed with a deficiency of coagulation factors. In addition, after injuries, patients with hemostasis disorders may develop delayed bleeding, and extensive hematomas often appear [6]. Platelets are non—nuclear blood elements, derivatives of megakaryocytes, the duration of their existence from the moment they leave the bone marrow to the moment of physiological disposal in the spleen is 8-10 days [9]. It is generally assumed that the normal platelet count should be in the range of  $150-400 \times 10^9/l$ . According to many authors, in cases where the platelet count is less than  $100 \times 10^9/L$ , thrombocytopenia should be detected. The frequency of this phenomenon is quite high - from 10 to 130 new cases per 1 million population [2,23]. Thrombocytopathy is a violation of the hemostasis system,

which is based on a qualitative defect and platelet dysfunction. Adhesion is caused by the presence of the Willebrand factor (FW) protein in plasma and platelets, which has three active sites, two of which bind to platelet receptors, and one to subendothelial and collagen fiber receptors. Simultaneously with adhesion, platelet aggregation (crowding, conglomerate formation) occurs. The ability to aggregate is a universal property of platelets [21,4]. It is known that complications of the second half of pregnancy are a consequence of placental ischemia with impaired endothelial function and a multisystem response of the maternal body. Maladaptation of placental circulation is based on the development of generalized microangiopathy and thrombophilia due to cardiovascular, infectious-septic, immune, metabolic and genetic factors [5,20]. With the introduction of highly sensitive hemostasis methods into the clinic, it has been established that all stages of the gestational process are characterized by increased body readiness for thrombosis. By the end of pregnancy, the activity of plasma coagulation factors increases. Data on the number of platelets in pregnant women are contradictory; along with the detection of thrombocytopenia, normal platelet counts and even cases of thrombocytosis were noted. The functional state of platelets is changing, which is characterized by an increase in their adhesive properties. Uncomplicated labor is accompanied by severe hypercoagulation and hyperfibrinolysis [9, 16]. Literature data indicate that the clinical manifestations of thrombocytopenia in 70-90% of cases are single, and only in 10-30% of patients they recur in various conditions. In some patients, they may recur at regular intervals under the influence of various factors. During pregnancy, as is known, significant changes occur in the body's systems, with increased psychoemotional stress. This, in turn, leads to the occurrence, aggravation and aggravation of the course of immune thrombocytopenia in pregnant women [15,22]. The world literature testifies to the combination of thrombocytopenia and pregnancy as a serious and severe condition, often ending in a sad outcome for the fetus and mother, dying from heavy bleeding during abortion or childbirth. According to the literature of the 20s of the twentieth century, infant mortality was approximately 50%, and maternal mortality was almost 100% (from uterine bleeding) [18,17]. To date, there are studies on various aspects of thrombocytopenia and thrombocytopathy in pregnant women, but they are few and contradictory. In this regard, many aspects and problems of the disease remain unknown and unresolved [6,8]. An increase in the number of various diseases in pregnant women, as a result of which there is a gradual deterioration in their health, has contributed to the study of many of them. However, studies on the pathology of platelets in pregnant women (clinical and laboratory features) and the development of algorithms for managing patients during pregnancy and childbirth have not been sufficiently developed. Consequently, the problem of protecting and improving the health of pregnant women with platelet pathology is one of the relevant areas of national medicine [1,19].

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