



ORIGINAL RESEARCH PAPER

Hematology

GESTATIONAL THROMBOCYTOPENIA

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ABSTRACT

Gestational thrombocytopenia is rare and less incidence in pregnant women, a low platelet count during pregnancy does cause less effect to mother and child however the regular monitoring and checking for platelets will help the better management of thrombocytopenia in pregnancy, the present article aims to discuss the causes, clinical presentation, diagnosis and management of gestational thrombocytopenia.

INTRODUCTION

Platelets function by plugging the injured site and cause the hemostasis, by preparing the bed for further inflammation process. The normal serum level of platelets in pregnancy is 150–400 X 10⁹/L. Reduction of serum platelet counts is arbitrarily considered mild if the count is more than 100, moderate at 50–100 and severe at less than 50. Platelet count may be low due to destruction of platelets, absorption or dilution effect caused due to lack of platelet production. Clinical features of thrombocytopenia are petechiae, nose bleeding, haematuria and gastrointestinal bleeding.

In last trimester the platelet count is drifted to downwards, this results at term in a level that is approximately 10% less than the pre-pregnancy level. The mechanisms for cause are thought to be a combination of dilutional effects and acceleration of platelet destruction across the placenta. Majority of women will have platelet counts within the normal range, if the starting count is at the lower end of the normal range thrombocytopenia occurs, henceforth thrombocytopenia is a common seen in pregnancy.¹

Most cases are mild and have no significance for mother or fetus but, in some instances, where thrombocytopenia is part of a complex clinical disorder, possible profound and even life-threatening results for both mother and baby. The effect of the disorder is taken into consideration, in few cases the cause is unique to pregnancy and the puerperium.

Gestational thrombocytopenia is a benign disorder with moderate thrombocytopenia. Platelet values below 50000/L in a pregnant woman exclude gestation thrombocytopenia.² Mothers with asymptomatic, and with no history of thrombocytopenia, the platelet count return to normal range with in two months of puerperium.

Gestational thrombocytopenia demands frequent monitoring of the mother for platelet counts and it doesn't cause serious complication. During labour mother with suspect thrombocytopenia, if indicated spinal or epidural anaesthesia the procedure should be performed with caution. When gestation thrombocytopenia is suspected but platelet count falls between 50000-80000/L, a diagnosis of immune thrombocytopenic purpura cannot be excluded. In recent times steroid Prednisone is administered for 10 days before delivery of child to increase platelet count and also to prevent possible anaesthetic and obstetrical risks.

Gestational Thrombocytopenia is also called as Incidental Thrombocytopenia Of Pregnancy, It is a mild (usually more than 70,000/ μ L platelet count) the incidence of thrombocytopenia is common in approximately 8% of all

pregnancies accounts for more than 70% of cases with thrombocytopenia in pregnancy occurs during pregnancy, especially during the third trimester. Women with this diagnosis are healthy, not at risk for foetal thrombocytopenia or bleeding complications, and have no history of autoimmune thrombocytopenia.

Platelet counts return to normal after delivery within 12 weeks of delivery, It can be difficult to distinguish Gestational Thrombocytopenia from autoimmune thrombocytopenia If thrombocytopenia is found late in pregnancy and counts are more than 70,000/ μ L, GTP is the most likely diagnosis. However, other causes of thrombocytopenia, including preeclampsia, should be excluded. Women with GTP do not require additional testing or specialized care Gestational thrombocytopenia can recur; the risk of recurrence, however, is unknown.³

The mild immune response, exaggeration of physiological process across placenta may lead to platelet consumption, this results in decrease in platelets count, however the platelet count returns to normal in postnatal period and resolve in subsequent delivery.⁴

Causes for gestation thrombocytopenia

A platelet count below the normal range is found in 8-10% of pregnancies. Approximately 75% of these cases are due to a benign process of gestational thrombocytopenia; 15-20% can be attributed to hypertensive disorders; 3-4% to an immune process; and the remaining 1-2% are made up of rare constitutional thrombocytopenias, infections and haematological malignancies. Various causes are identified associated with cause of gestation thrombocytopenia are

- Immune thrombocytopenic purpura (ITP) (11.05%)
- Preeclampsia (10.05%)
- HELLP (Hemolysis, elevated liver enzymes and low platelet count) syndrome (12.06%)
- There are additional, rarer causes of thrombocytopenia during pregnancy, including
- Disseminated intravascular coagulation (DIC)
- Thrombotic thrombocytopenic purpura (TTP)
- Autoimmune conditions such as anti-phospholipid antibodies syndrome (APLA) Systemic lupus erythematosus (SLE)
- Bone marrow disorders such as MDS myelofibrosis
- Acute fatty liver of pregnancy (AFLP)
- Dilutional
- Hemolytic uremic syndrome (HUS)
- Drugs as Heparin induced thrombocytopenia or aspirin induced thrombocytopenia
- Inherited, Type IIB vWD
- Nutritional deficiencies B12, folate
- Pseudothrombocytopenia

Clinical findings

Although there are no alarming symptoms related to gestational thrombocytopenia, an individual with thrombocytopenia might show the following symptom

- Nose bleeds
- Gums bleeding
- Blood in urine/stool
- Easily bruised
- Enlarged spleen
- Jaundice
- Continuous bleeding due to cuts
- Heavy menstrual flow
- Rash-like spots (petechiae), mainly on the lower legs

Investigations and diagnostic findings

Complete blood count (CBC) is common blood test is used to determine the number of blood cells, including platelets, in a sample of blood.

Blood smear is often used to confirm the number of platelets observed in a complete blood count.

Bone marrow exam test may be used to help identify the cause of a low platelet count.

Ultrasound Performed to understand around the spleen to determine if the spleen is enlarged due to an overactive spleen.

Bone marrow aspiration or biopsy conduct a bone marrow aspiration or bone marrow biopsy, if they suspect there is a decreased production of platelets in the bone marrow.

Treatment of gestational thrombocytopenia

- Management for most cases of thrombocytopenia majority of cases the pregnancy and delivery are treated as normal. In cases of moderate or severe thrombocytopenia an anaesthetic⁴ epidural anaesthesia with platelet counts of less than 80000 need precaution management.
- Prednisole steroids are considered when the count is 50–70 thousand.
- Counts should be monitored periodically. When maternal counts are less than 80000 during the pregnancy, a cord sample are taken to ensure that the baby's counts are normal.
- Consider taking further neonatal samples on days 1 and 4, as neonatal thrombocytopenia can present, maternal platelet counts are low, appropriate management is planned and the risk of fetal thrombocytopenia is reduced.
- Caesarean section are reserved for obstetric indications only.⁵

CONCLUSION

Those who have no previous history of thrombocytopenia, besides the occurrence in previous pregnancies (gestational thrombocytopenia), the platelet levels will go back to a normal range 1–2 months after the delivery. Post delivery, approximately 1–3 months later, women with gestational thrombocytopenia should have a complete blood test conducted. Lastly, gestational thrombocytopenia is a disorder that may reoccur in future pregnancies. Most of the cases get back to normal.

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