RISK FACTORS AND FETOMATERNAL OUTCOME IN PREGNANCY WITH THROMBOCYTOPENIA.

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ABSTRACT… Objectives: To find out the risk factors and their effects on mother and fetus in pregnancy with thrombocytopenia. Study Design: Cross sectional study. Setting: Department of Obstetrics and Gynaecology at Liaquat University Hospital Hyderabad. Period: Six months (1st July 2016 to 31st December 2016). Material and Methods: Total 96 patients with gestational age >24 weeks having platelet count below 150X10⁹/L were included in the study. Patients admitted throughout patient clinic department of obstetrics & Gynecology at Liaqat University Hospital. Those patients having platelet count below 150X10⁹/L were registered for study. Proforma filled which include Patients demographics details, gestational age, complete blood count (Having platelet count) other important investigations like coagulation profile (PT, APTT), Ultrasound and LFT noted in proforma SPSS version used for analysis. Descriptive statics were calculated frequency and percentages were drawn for the study. Results: Risk factors related to thrombocytopenia included PIH¹ (18.8%), preeclampsia 14(14.6%), eclampsia 10(10.3%), HELLP Syndrome 6(6.3%), Viral Hepatitis 12(12.5%) and in 36(37.5%) no risk factors was found. Maternal complication were placental abruption21 (21.8%) post partam hemorrhage 14(14.6%). 7(7.3%) were transferred to ICU and 02(2.1%) maternal death was seen. Fetal outcome include low Apgar score of <6 in 17(17.7%), low birth weight 16(16.7%) and NICU admission 11(11.5%). Conclusion: Thrombocytopenia is a common finding in pregnancy careful diagnosis is important to distinguish serious causes from mild then to manage mother and fetus appropriately. Thrombocytopenia in pregnancy is associated with adverse maternal and fetal outcome in significant number of pregnant woman.

Key words: Fetal Outcome, Maternal Health, Risk Factors, Thrombocytopenia.

INTRODUCTION
Thrombocytopenia is simply defined as platelet count below 50,000 per micro liter. Decreased platelet count is particurally due to hematologic disorders.¹-³ Other causes of thrombocytopenia include pre-eclampsia, HELLP syndrome and ITP. This disease affects 6% to 15% of all pregnant women usually at the end of pregnancy and is moderate. It is the common and frequent hematologic disorder in pregnancy apart from anemia. The most common cause of thrombocytopenia during pregnancy is the gestational thrombocytopenia which occurs in 3rd trimester of pregnancy. This cause needs no treatment but resolves spontaneously.⁴,⁵

Gestational thrombocytopenia is defined as thrombocytopenia during pregnancy and platelet count is more than 70,000/μL.⁶ The pathophysiology entails that the fetus waste products into mothers blood increases the activitivty of spleen of mother which removes blood cells quickly causing destruction of platelets.⁷ Patients usually present with no any alarming symptom/sign due to gestational thrombocytopenia. Bleeding from nose, gums, hematuria, splenomegaly, bruises, jaundice and petechiae.⁸

The diagnosis of gestational thrombocytopenia is challenging and is difficult to differentiate between ITP and Gestational thrombocytopenia.⁹ If pregnant patient has previous history of ITP, she cannot be diagnosed as gestational...
thrombocytopenia. Complete blood count is advised that shows decreased platelet count. Platelet antibodies are done to detect other causes like quinine. Bleeding time and clotting time is assessed. Ultrasound of spleen is done to diagnose the over activity of the organ. Bone marrow aspiration and biopsy both are done. There is no specific treatment for gestational thrombocytopenia. Pregnant lady has to perform her normal activities and the treatment for the well being of baby and lady accordingly. If pregnant lady had ITP, treatment should be done with corticosteroids or intravenous immunoglobulin. Gestational thrombocytopenia resolves spontaneously after 1-2 months of delivery and platelet count becomes normal. Prognosis in these cases is excellent without any remedy.

The rationale of our study is find out the risk factors and effects of thrombocytopenia on pregnant mother and fetus as well in order to develop awareness among the patients regarding this disease during pregnancy.

METHOD
This cross-sectional study includes 96 patients, conducted in the Obstetrics and Gynecology Unit II at the Liaquat University Hospital in Hyderabad. Any age and parity of all pregnant women associated with gestational age more than 24 weeks. Complete blood count (CBC) revealed thrombocytopenia cut off value of platelet < 150000/μL were included in this study. The predesigned proforma, having complete bio data, gestational period, symptomatology, clinical findings, investigations like complete blood count, platelet count, coagulation profile (prothrombin time, activated partial thromboplastin time), ultrasound examination and liver function test. Exclusion Criteria were all non pregnant patients with thrombocytopenia, gestational age < 24 weeks, postpartum women and Non willing patients.

RESULTS
A total of 86 Women with GDM attending OPD for antenatal care at tertiary care hospital Hyderabad were included in this study. Most of the women were 28 to 40 years of age as shown in Table-I. The average age of the women was 31.88±3.04 years similarly mean parity and gestational age of the women is also given in Table-I.

Frequency of Risk Factors leading to thrombocytopenia were PIH in 18(18.8%) cases followed by preeclampsia in 14 (14.6%) cases, eclampsia in 10(10.3%) cases, HELLP syndrome in 06(6.3%) cases, viral Hepatitis in 12(12.5%) cases and No Risk in 36(37.5%) cases (Figure-1).

In our study maternal outcome related to thrombocytopenia were observed and Placental Abruption in 21(21.8%) cases, followed by Post Partum Hemorrhage in 14(14.6%) cases (Figure-2).

Fetal outcome related to thrombocytopenia were observed and Low Birth Weight in 16(16.7%) cases, meconium Stained Liquor in 7(7.3%) cases and need NICU admission in 11(11.5%) cases (Figure-3).

<table>
<thead>
<tr>
<th>Descriptive</th>
<th>Mean</th>
<th>Minimum/Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>31.88±3.04 years</td>
<td>24/40 years</td>
</tr>
<tr>
<td>Gravidity</td>
<td>3.72±1.41</td>
<td>01/06</td>
</tr>
<tr>
<td>Parity</td>
<td>3.0±1.63</td>
<td>01/06</td>
</tr>
<tr>
<td>Hb% (g/dl)</td>
<td>8.8±0.99 Hb% (g/dl)</td>
<td>7.5/10.6 Hb% (g/dl)</td>
</tr>
</tbody>
</table>

Table-I. Descriptive statistics of age, gravidity, parity, Hb% (n=96)

Figure-1. Risk factors related to thrombocytopenia (n=96)
DISCUSSION

Thrombocytopenia in pregnant women is uncommon and is about 10%.15 The disease is usually diagnosed incidentally while undergoing the routine biochemical investigations like Complete Blood Count. This investigation shows decreased platelet count that has not been causing symptoms to the patient. In our study, the prevalence of gestational thrombocytopenia was 37.5%. In some studies conducted on gestational thrombocytopenia, prevalence was 58.2% and platelet count was below 100X10^9/l. Pre-eclampsia was found to be frequent cause in those studies. But in our study, prevalence of this disease is a little bit lower and the preeclampsia was found to be on 3rd number as risk factor of gestational thrombocytopenia. 14.6% patients had pre-eclampsia as risk factor. 37.5% patients had no any risk factor to develop thrombocytopenia during pregnancy.15,16

Regarding the maternal complications, 41.7% patients developed no any complication. Abdella and lee reported 26.8% patients developed placental abruption but in our study it was only 21.8%.15,17 Webert et al reported in study that the median age of patients suffering from this disease was 26 years. In our study maternal age incidence was also found to be similar.17

The fetal outcome was 34.3% alive babies with good APGAR score. Low birth weight and IUGR was noted in women suffering from Hypertension during antenatal period. Adverse perinatal outcome was mostly due to preeclampsia, HELLP syndrome and the group of rarer causes including DIC, familial TTP, myeloproliferative diseases. In our study, we found not a single case of DIC and HELLP syndrome. McCrae concluded that hypertension during pregnancy commonly cause severe IUGR.15,18

It is fact that gestational thrombocytopenia usually does not cause any pregnancy related complication for mother as well as neonate. Thrombocytopenia in a neonate is very rare and is treated accordingly without any fatal complications as is unveiled by McCrae and Cook et al.16,19

In another study, there were no any maternal complications except developing infected wound at surgical site. Likewise, neonatal complications were also negligible. But the neonates Complete Blood Count showed platelet count less than 1 lac/mm^3 (p=0.014). It indicates that neonates of pregnant patients suffering from GT must undergo the routine blood investigations in order to detect any hematological complications. This study of neonatal thrombocytopenia is contradictory to other studies which do not accept gestational thrombocytopenia as cause of neonatal thrombocytopenia. Our study also concludes that gestational thrombocytopenia is not causative risk factor for neonatal thrombocytopenia.7,20

CONCLUSION

Thrombocytopenia is a relatively common occurrence in pregnancy. Diagnosis is largely
dependent on timing of its onset, severity of the thrombocytopenia, and the association with other abnormalities. As most treatment recommendations have been based on observational reports, optimal management of mother and safe delivery of the newborn, the most common risk factor associated with gestational thrombocytopenia was found to be hypertensive disorder of pregnancy 42(43.75%). Hemorrhage including antepartum and postpartum was most significant complication in our study. More than half 63(66%) of study population suffered from adverse fetal outcome including perinatal death.

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REFERENCES


Ships don't sink because of the water around them; ships sink because of the water that gets in them. Don't let what's happening around you get inside you and weight you down.

“Unknown”