Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/jptcp.v29i04.4512

A PROSPECTIVE OBSERVATIONAL STUDY OF VARIOUS MATERNAL AND PERINAL OUTCOMES IN SEVERE PRE ECLAMPSIA ASSOCIATED WITH THROMBOCYTOPENIA AND LIVER DYSFUNCTION-

Dr. Renu Yadav[1*], Dr. Shambhavi Soni[2], Dr. Neelam Rajput[3]

[1*]Senior resident, Gajra raja medical college, Gwalior, madhya pradesh
[2]year PG Resident, Gajra raja medical college, Gwalior, madhya pradesh
[3]Professor, Gajra raja medical college, Gwalior, madhya pradesh

***Corresponding Author:** Dr. Renu Yadav
*Senior resident, Gajra raja medical college, Gwalior, madhya pradesh

Abstract-
Pre eclampsia/eclampsia is one of the 3 leading causes of maternal morbidity and mortality worldwide**.**Thrombocytopenia complicates up to 7-8% of all pregnancy
Aim and objective- case study about the maternal and perinatal morbidity and mortality in pre eclampsia with thrombocytopenia and liver dysfunction.
Method and material- prospective observational study of the 100 pregnant women in third trimester with help syndrome admitted in the department of obstetrics and gynaecology, kamla raja hospital which is attached with gajra raja medical college ,Gwalior mp from 30 sept. 2022 to 30 june 2023
Result- In the present study 100 patients was studied in a span of two years out of which 68% of the cases had pregnancy induced hypertension.

- It was common in the age group 21-30 years (64%) and 55% were primigravida. The incidence of severe PIH with thrombocytopenia were significantly higher compared to group with mild PIH with thrombocytopenia.

LSCS (47.6%) was done in group severe PIH with thrombocytopenia in the period of gestation between 34-37 weeks for foetal indication like severe IUGR and oligohydramnios. Out of 8 cases of eclampsia with thrombocytopenia vaginal delivery were more in the period of gestation between 34-37 weeks (75%). Caesarean deliveries were more in the period of gestation between >37 weeks (66.7%). HELLP syndrome was found in 24% maternal mortality in class II and class III. Mode of delivery was vaginal route in class I (62.5%). Among all the HELLP patients maternal mortality was 8.3% followed by 41.6% cases presented with eclampsia and PPH (20.9%), 16.7% for renal failure, 12.5% with DIC. Patients with class I HELLP syndrome were treated with fresh frozen plasma and platelets. Dexamethasone rescue regimen was started for all the three classes.
Conclusion- This study shows that maternal and neonatal morbidity and mortality are increased in pregnancies complicated by severe preeclampsia with HELLP syndrome. maternal morbidity can be recognized early, it is possible to prevent severe morbidity through early intervention with delivery, antihypertensive therapy and prophylactic magnesium sulphate treatment.

INTRODUCTION-

Hypertensive disorders in pregnancy are a major cause of morbidity and mortality among women and their offspring in developing countries.[1–4]. High blood pressure complicates almost 10% of all pregnancies .thrombocytopenia in pregnancy may be physiological and pathological. physiological thrombocytopenia is most common in 3rd trimester of pregnancy due to decreased platelet counts. Pathological thrombocytopenia in pregnancy is associated with hypertension in pregnancy, pre eclampsia, severe pre eclampsia, HELLP syndrome.

HELLP syndrome is an acronym for haemolysis, elevated liver enzymes and decreased platelet counts.

Thrombocytopenia is defines as sub normal number of platelets in the circulating blood.

A finding of thrombocytopenia during pregnancy poses an intriguing problem before the obstetricians. Thrombocytopenia complicating hypertensive disorders of pregnancy are responsible for approximately 20% of all cases of thrombocytopenia during pregnancy. Thrombocytopenia causes unnecessary and invasive additional testing and caesarean deliveries. Evaluation and treatment of dis disorder can be expensive and distressing to patients Thrombocytopenia carries a risk for both the mother and her foetus .associated with substantial maternal and neonatal morbidity and mortality.

AIM AND OBJECTIVE-

case study about the maternal and perinatal morbidity and mortality in pre eclampsia with thrombocytopenia and liver dysfunction.

METHOD-

prospective observational study of the 100 pregnant women in third trimester with hellp syndrome admitted in the department of obstetrics and gynaecology, kamla raja hospital which is attached with gajra raja medical college ,Gwalior mp from 30 sept. 2022 to 30 june 2023.

From the records sheets of pregnant women with pregnancy induced hypertension with detailed history of period of gestation, high risk factors, complication during present and past pregnancy like pregnancy induced hypertension, diabetes mellitus, APLA, Intra uterine death, hepatitis, jaundice, abruption.

Inclusion criteria-

1. Pregnant women with HELLP Syndrome
2. Pregnant women with diagnosed pre-eclampsia, and eclampsia with thrombocytopenia
3. Third trimester pregnant women with BP measuring more than 140/90 mmhg with thrombocytopenia.

Exclusion Criteria-

1. Patient with history of viral fever
2. Patient with HIV
3. Patient established Idiopathic thrombocytopenia disease
4. Patients with hypertension before pregnancy.

A Written consent is taken in who satisfy these inclusion criteria.

Blood pressure measurements and complete blood count, RFT,LFT, Urine albumin, periphere blood smear study are done.

Study Is about maternal and perinatal outcome related to mode of delivery (vaginal, 1491aesarean,instrumental,), maternal and perinatal morbidity and mortality and complications likes pulmonary edema, renal failure, cerebral venous thrombosis, DIC, PPH, end organ failure, severe anemia.

Result and observation-

TABLE 1. Etiology of thrombocytopenia

Etiology	No. of cases	percentage
Mild PIH	25	25
Severe PIH	45	45
Eclampsia	12	12
HELLP Syndrome	18	18
Total	100	100

In this study out of 100 cases 25 and 28 cases are mild and severe pregnancy induced hyper tension, 12 cases were presented with and 18 cases were HELLP syndrome.

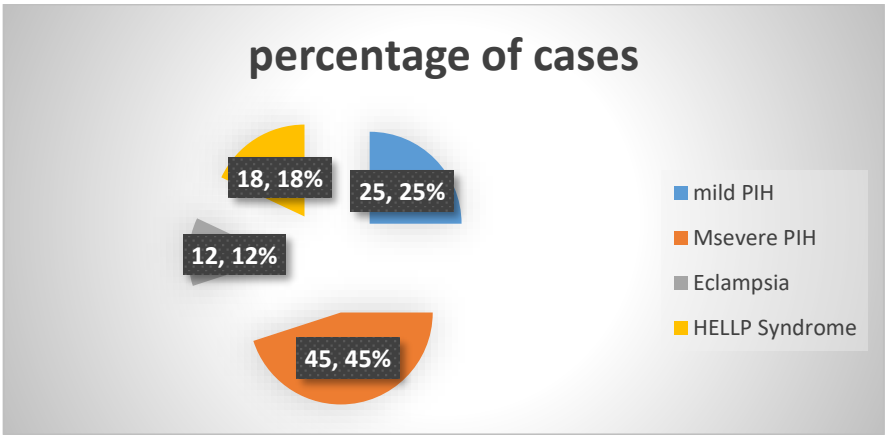
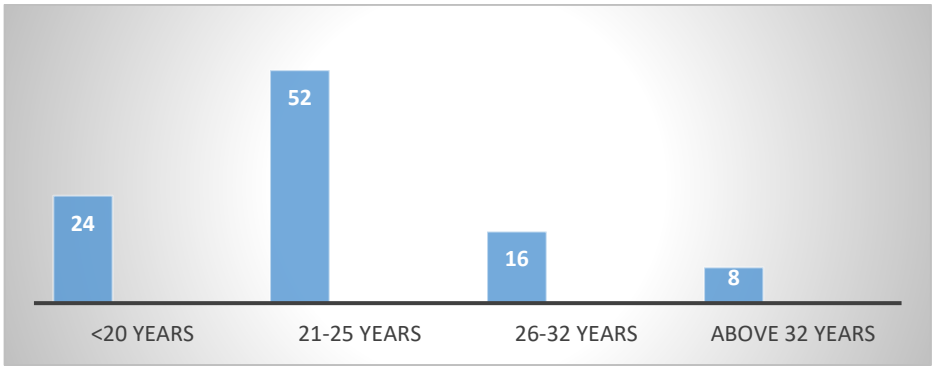
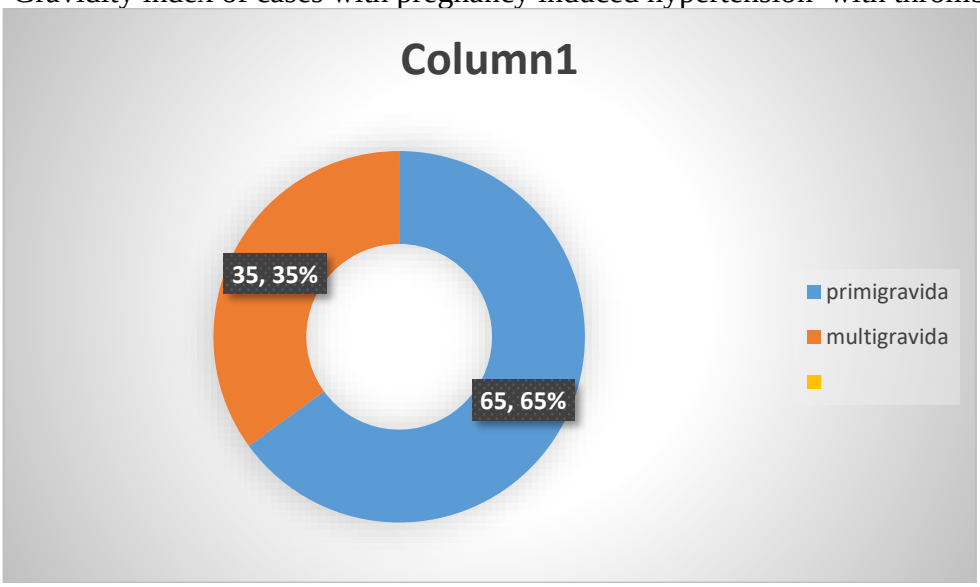


TABLE 2- Age distribution of cases according pregnancy induced hypertension with thrombocytopenia



Majority of the study cases in our study were aged between 21-25 years(52%) followed by <20 years (22%).Minimum numbes of cases were presented with age above 32 years.

TABLE -3 Gravidity index of cases with pregnancy induced hypertension with thrombocytopenia



In our study 65% cases were primi gravida and 35 % were multigravida.

TABLE 4- Analysis of mode of delivery and gestational age in mild PIH.

Gestational age	Mode of delivery	Mild PIH	Percentage
25-34 weeks	Instrument delivery	1	16.7%
	cesarean	2	33.3%
	vaginal	3	50%
	total	6	100%
34-37 weeks	Instrumental delivery	2	13.3%
	Caesarean	4	26.7%
	vaginal	9	60%
	total	15	100%
Above 37 weeks	Instrumental delivery	2	28.5%
	cesarean	1	14.4%
	vaginal	4	57.1%

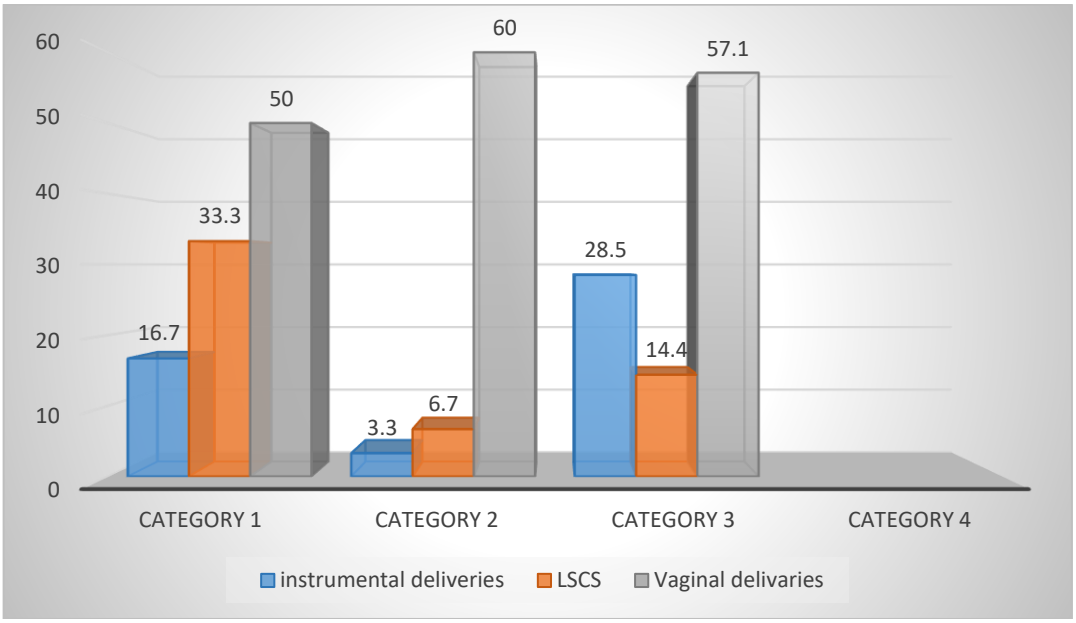


TABLE NO. 5- Analysis of mode of delivery and gestational age and severe PIH with and without thrombocytopenia

g. age	Mode of delivery	Thrombocytopenia cases	Percentage
25-34 weeks	instrumental	0	0
	lscs	2	33.4
	vaginal	4	66.6
34-37 weeks	instrumental	3	14.3
	lscs	10	47.6
	vaginal	8	38.1
Above 37 weeks	instrumental	2	15.4
	lscs	7	53.8
	vaginal	4	30.8

TABLE 6- Analysis of mode of delivery and gestational age in eclampsia with thrombocytopenia. Out of 24 cases of eclampsia with thrombocytopenia 1 case of 25-34 weeks of gestation, 15 cases were 34-37 weeks of gestation and 8 cases were above 37 weeks of gestation.

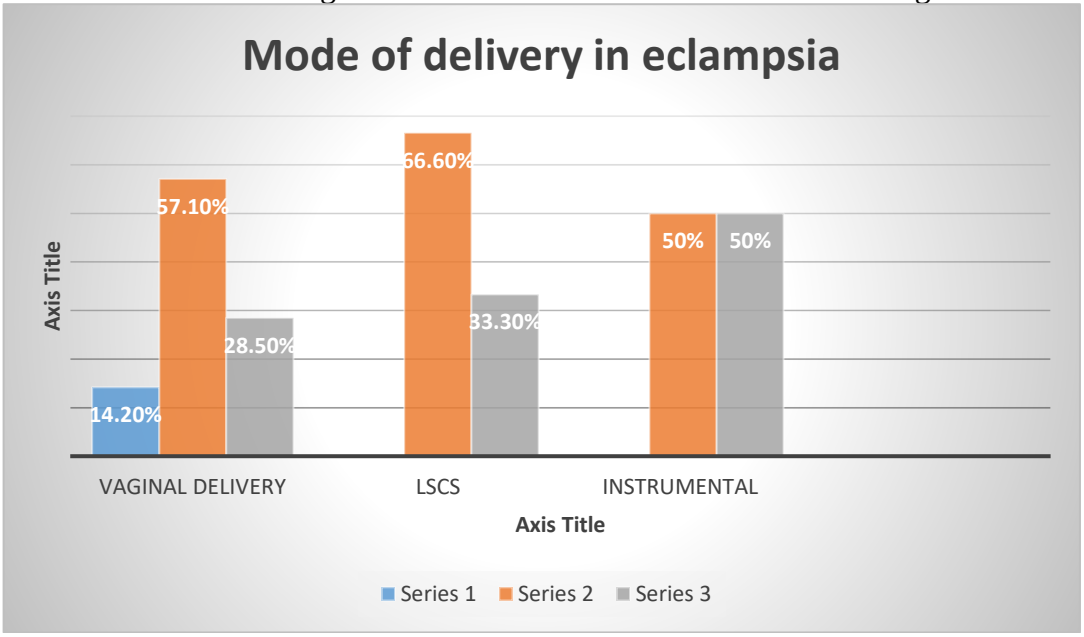


TABLE 7- Distribution of cases according to the classification of HELLP Syndrome

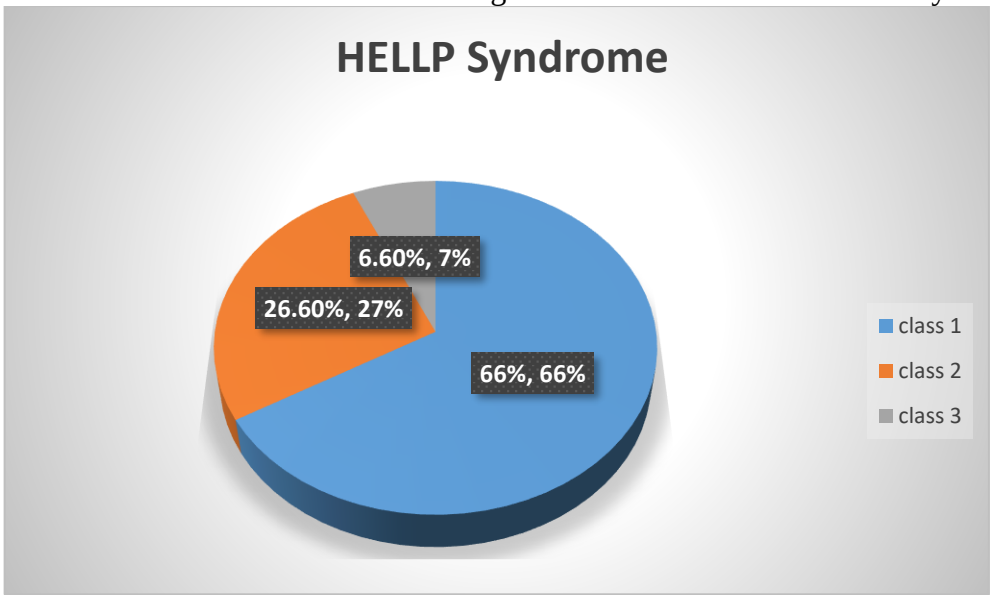


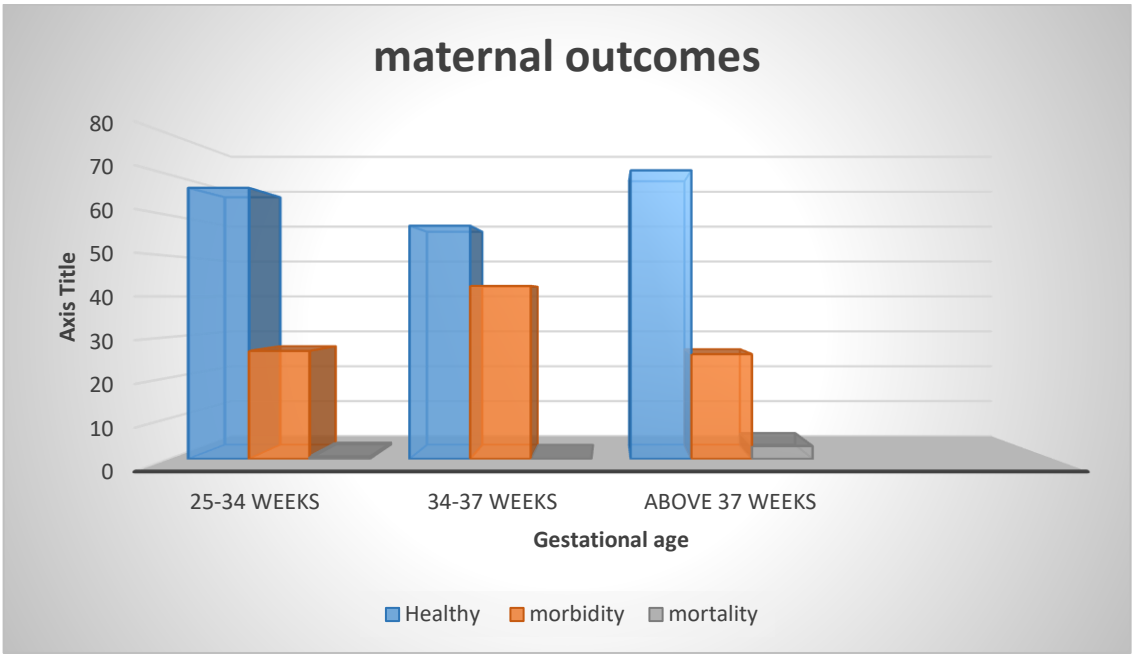
TABLE 8- Analysis of mode of delivery and gestational age among mild and severe PIH cases with HELLP Syndrome

Gestational age	Vaginal deliveries	LSCS	Instrumental deliveries
25-34 weeks	1(.6%)	0	3(37.5%)
34-37 weeks	10(66.6%)	10(62.5%)	5(62.5%)
37 weeks	4(26.6%)	6(37.5%)	0
total	15	16	8

Out of the 31 casesof HELLP syndrome , 15 cases were delivered by vaginally , 16 cases were caesarean delivery and 8 cases were instrumental delivered.

TABLE 9- Analysis of maternal morbidity and mortality in all cases admitted with thrombocytopenia.

Gestational age	thrombocytopenia				Maternal outcomes
25-34 weeks	Mode of delivery				
	instrumental	vaginally	cesarean	total	
	3(100%)	5(62.5%)	2(50%)	10(66.7%)	healthy
	0	3(37.5%)	1(25%)	4(26.6%)	morbidity
	0	0	2(50%)	2(50%)	Mortality
34-37 weeks	3(30%)	20(71.4%)	8(50%)	31(57.4%)	heathy
	7(70%)	8(28.6%)	8(50%)	23(42.6%)	morbidity
	0	0	0		mortality
Above 37 weeks					
	3(75%)	10(71.4%)	6(69.3%)	22(71%)	healthy
	4(30.7%)	3(21.5%)	4(30.7%)	3(21.5%)	Morbidity
	0	1(7.1%)	0	1(7.1)	mortality



DISCUSSION-

Thrombocytopenia complicating hypertensive disorders of pregnancy are approximately 10%. Preeclampsia affects approximately 6% of all pregnancies.

In our study of 100 cases of thrombocytopenia, 68 % of the cases had Pregnancy induced hypertension.
In the other studies done by Robert S Egerman (7-10%)43 , Spellacy and associates (5%)44, Cunnigham and leveno (8.5%)45, Hauth et al (5.6%)46 was the overall incidence of PIH.

Incidence of HELLP: -
Study group Incidence
Ramadan MK20 20%
Burrows 38 21%
Sibai et al34 18%
Martin et al49 22%
Present Study 23%
HELLP syndrome is part of this spectrum of platelet consumption and coagulation activation in pregnancy. Incidence of thrombocytopenia among patients with severe PIH and eclampsia around 20% . In the present study, 23% patients had
HELLP syndrome.

CONCLUSION-
Thrombocytopenia in pregnancy induced hypertension carries a risk for both the mother and her foetus. The associated causes like abruption, retain dead foetus, septicaemia and disseminated intravascular coagulation aggravates the complication for thrombocytopenia. Thrombocytopenia more often occurs with the early onset of pregnancy induced hypertension and carries severe morbidity to both mother and foetus.
HELLP syndrome remain problematic for the obstetric health care providers. The non specific signs and symptoms of this disorders early in the disease process makes the accurate diagnosis difficult and delays, early treatment, which has the best prognosis for the both maternal and foetal outcome. Thrombocytopenia perse did not affect the mode of delivery.

Administration of corticosteroids – dexamethasone rescue to mother should be done as soon as possible to increase the platelet count and to enhance lung maturity and to decrease the risk of intraventricular haemorrhage and necrotising enterocolitis between 28 to 34 weeks, thus reducing the maternal and perinatal morbidity and mortality.

REFFERENCE-

1. McCrae KR, Samuel P, Schrciber AD. Pregnancy associated Thrombocytopenia: pathogenesis and management blood 1992;80;2697-2714.
2. Charo IF, Kieffer N, Philips DR. Platelet membrane glycoproteins. Hemostasis and thrombin; basic principles and clinical practice, Philadelphia, PA: JB Lippincott Co.; 1994 .p.489-507.
3. G. Richard Lee, John Frester, John Luken Wintrobes. Clinical hematology Vol.2, 10th edition; 1999 .p.1579-1582.
4. Rodgers RPC, Levin J. A critical reappraisal of the bleeding time. Sem Thromhemost. 1990;16:1-144.
5. Hels AF. The blood and the blood in haemophilia and other haemorrhagic disease. Arch Med 1916;17:203-220.
6. Robbins, Kotran, Kumar Pathologic basis of disease. 3rd edition 1998 .p.91-95.
7. Branchog I, Kulli J. Weinfeld A. Platelet enamel & platelet production in ITP. Br J Haematol 1974;27:127-143.
8. Harker LD, Finch CA. Thrombo Kinelin in man. J. Clin Invest 1969; 48:963-974.
9. Menell JS, Bursel JB. Antenatal Management of the thrombocyto-penias. ClinPerinatol. 1994;21:591-614.

10. Greer IA, Walked J, Cameron AD, et al. A prospective longitudinal study of immunoreactive prostacyclin and TxA2metabolites in normal and hypertensive pregnancy. Clin Exp Hypertens 1985;B4;167-182.
11. Gowiand E, Kay HE, Spillman. Agglutination of platelets by a serum factor in the presence of EDTA.J. Clinico Pathol 1969;22:460-464.
12. Kield & Berg CR, Hershgold EJ. Spurious thrombocytopenia. JAMA 1974;227:628-630
13. Burrows RF, Kelton JG. Fetal thrombocytopenia and its relationship to Maternal thrombocytopenia N-Engl J Med 1993;329:1463-1466.
14. Berchtold, Wenger M. Autoantibodies against platelet glycoprotein in autoimmune thrombocytopenic purpura; their clinical significance and response to treatment. Blood 1993;81:1246-1250.
15. Kenton JG. The serological investigation of patients with autoimmune thrombocytopenia. Thromb Hoemost 1995;74:228-233.
16. Burrows RF, Kelton JG. Low fetal risks in pregnancies associated with idiopathic thrombocytopenic purpura. Am J Obstet Gynecol. 1990;163: 11471150.