

A STUDY OF PRE-ECLAMPTIC TOXAEMIA IN PREGNANCY

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SUMMARY

Hypertensive disorders in pregnancy is a common condition which is responsible for majority of maternal and perinatal morbidity and mortality. Dewhurst emphasised that hypertensive disorders constitute one of the major threats to the mother's life during pregnancy, labour, puerperium. A retrospective study of total of 119 cases of preeclamptic toxemia of pregnancy admitted in our unit at the LTMM College and LTMG Hospital was undertaken. This study analyses the booking and gravida status, grade of hypertension, investigation, method of treatment, mode of delivery and perinatal outcome. 59 patients were admitted as emergency cases and 41 were booked. Hypertension of mild to moderate variety comprised of 55 patients, whereas 45 patients belonged to severe category. 89 patients had a vaginal delivery either spontaneous normal or accelerated with pitocin or aided with vacuum or forceps and 11 patients underwent caesarean section. There were 6 stillbirths. No early neonatal deaths were encountered in our series.

Introduction

Hypertensive disorders in pregnancy is a common condition which is responsible for majority of perinatal mortality and maternal morbidity and mortality. Ignorance, illiteracy and failure to utilise ante-natal care provided, use of sedatives to treat toxemia and late referrals from the peripheral hospitals are some of the factors responsible for it. In the United States and some European countries over the last 25 years majority advocate parenteral magnesium sulphate therapy for

eclampsia and achieved 90% fetal salvage and reduced maternal mortality to zero levels. It is known that onset of convulsion in severe pre eclamptics increases the perinatal and maternal morbidity and mortality. It is apparent from this study that use of parenteral magnesium sulphate in severe pre-eclamptics prevents occurrence of convulsions.

Materials and Methods

In the present study, 119 cases of preeclamptic toxemia with vertex presentation admitted to L.T.M.G.H. were analysed. Study of booking status was done. The

relation of gravida status with period of gestation on admission to the severity of toxemia was studied. Patients were classified in mild - moderate group (Group A-BP 140/90 \leq 160/110, mild pedal oedema and/or proteinuria of less than ++), and severe group (Group B-BP 160/110, proteinuria ++ or more, and/or severe pedal oedema and positive funduscopy findings). All the patients were admitted to the antenatal ward.

Patients in group A were given complete bed rest with salt restricted diet and oral sedatives. Funduscopy was done on admission, and urine albumin done daily. Routine blood and urine investigations done. Tab. Aldomet was added to the above treatment if no significant fall in blood pressure was found within 48 to 72 hours. Hypertension persisting in spite of this was treated with oral Nifedipine. Patients conserved if Blood pressure was controlled and if period of gestation was less than 37 weeks. Induction of labour was done if the period of gestation was term or if the patient's B.P. was not controlled with the above treatment after 7 days.

In group B, in addition to this sublingual nifedipine was given to overcome hypertensive crises and magnesium sulphate prophylaxis against convulsions which was continued s.o.s. after delivery. If conservation was required magnesium sulphate given for 24 hours with Nifedipine S.O.S. Patient shifted to sedatives after 24 hours.

After induction of labour, artificial rupture of membranes was done at 3-4 cms cervical dilatation with good uterine contractions and pitocin drip started to accelerate labour when indicated. Outlet forceps applied to cut short the second stage of labour in group B patients. We

studied pattern of delivery in primi and multigravida patients. Perinatal outcome studies and the perinatal mortality calculated.

Patients with period of gestation less than 32 weeks were conserved and excluded from statistics. The follow up study of these patients is going on.

Observations : All figures indicate % of patients.

TABLE - I
RATIO OF BOOKED TO UNBOOKED CASES

ANC booked	ANC unbooked	Total
41	59	100

Criteria for booking : Two or more ANC visits

55 patients belonged to group A while 45 to group B.

TABLE - II
AGE INCIDENCE

Age in years	Primigravida	Multigravida
17-20	27	—
21-24	22	19
25-28	3	18
29-32	2	9

In primis the incidence of preeclampsia was maximum (50%) in patients below 20 years while in multigravidas there was no patient below 20 years. It was maximum (19%) between 21-24 age group.

TABLE - III
DISTRIBUTION OF PATIENTS
ACCORDING TO GRAVIDA STATUS

Gravidity	No of patients
G1	54
G2	21
G3	31
G4	3
G5	1
G6 and above	0

Incidence was maximum in primigravidas (54%)

TABLE - IVA
RELATION OF GESTATIONAL
AGE WITH GRAVIDITY

Gest. age	Primis	Multis
34-36 weeks	20	27
37 weeks and above	34	19
	54	46

63% of the primis and 41% of the multis presented beyond 37 weeks.

TABLE - IVB
RELATION OF GESTATIONAL
AGE WITH SEVERITY OF HT

Gest. age	Mild-mod HT	Severe HT
34-36 weeks	26	22
37 weeks and above	29	23
Total	55	45

51% from severe category and 53% from mild-moderate category presented to us beyond 37 weeks of gestation.

TABLE - VI
PATTERN OF DELIVERY

	Group A		Group B	
	Primis	Multis	Primis	Multis
Vaginal delivery (Spontaneous + accelarated)	26	26	—	—
Forceps	2	0	24	15
Caesarean	0	1	4	2

TABLE - VII
PERINATAL OUTCOME

Birth weight in relation to gravidity and severity of H.T.

	Primi				Multi			
	≤2 kg	2-2.5 kg	2.5-3 kg	3 kg/more	≤2 kg	2-2.5 kg	2.5-3 kg	3 kg/more
Group A	2	7	18	6	3	8	9	2
Group B	3	8	12	3	5	6	6	2

Table 6 indicates that 26 out of 54 primigravidas in group A underwent vaginal delivery (Spontaneous/Accelerated) while 26 out of 46 multis did so. None of the primis in group A required caesarean section whereas 1 multigravida was delivered by caesarean for obstetric indication. In group B, 24 primis and 15 multis delivered by outlet forceps. Incidence of caesarean was 4 in primis and 2 in multis in this group.

Table 7 shows that 24 primis and 11 multis in group A, while 15 primis and 8 multis in group B delivered babies more than 2.5 kg.

Apgar at birth: In Group A 30 babies had Apgar more than 7, 3 between 3-7 and 2 had an Apgar below 3. In Group B 36 babies had Apgar more than 7.6 in between 3 & 7 and 3 had less than 3.

Out of 100 cases studied 2 were still-born (fresh) in group A and 4 (2 fresh and 2 macerated) in group B. In group A one was 3 kgs (Cause - accidental hemorrhage) and other was 2.4 kg. while in group B both fresh still borns were less than 2 kg. No early neonatal deaths were encountered in our series. Therefore PNMR in our series was 60 per 100 births. The overall PNMR during this period in our institution was:

TABLE - VIII
RESPONSE TO TREATMENT

Group A	Fall in BP	% of Patients
	48-72 hours	75
	96 hours	80
	7th day	95
Group B	48 hours	13.3
	48-72 hours	52.22
	72 hours-7 days	86.7
	more than 7 days	

Table 8 indicates that 62.22% per cent of patients (22) in group B showed a significant fall in blood pressure within 48 to 72 hours. 2 patients developed convulsions as magnesium sulphate was not given, because it was contra-indicated.

Results

1. Incidence of preeclampsia is higher in unbooked cases due to lack of antenatal care.
2. Incidence is highest in primigravida (27%) below 20 years.
3. Maximum number of patients are detected (53%) beyond 37 weeks of gestation indicating that early antenatal registration and follow-up will decrease the incidence of pre-eclampsia.
4. With prophylactic use of parenteral magnesium sulphate in severe hypertensives the convulsions are prevented and only 4 stillbirths were encountered.
5. Use of prophylactic forceps in severe hypertensives decreases maternal morbidity and improves perinatal outcome.

Discussion

Traditional agents used in lytic cocktail regime (Menon et al 1961) and Diazepam do not have anticonvulsant action. They sedate the patient and cause respiratory depression. Magnesium sulphate (Pritchard 1975) (Bhatt and Barfiwala 1985) used prophylactically has the following advantages:-

1. Aborts convulsions
2. Wide margin of safety
3. Patients remain conscious and well oriented
4. No respiratory depression
5. Fetal salvage is good.

Majority of side effects are minor in severity (Nagar et al J. of Obstet. 38:523, 1988).

Sublingual nifedipine has the following advantages:-

1. Hypertensive crisis is rarely seen.
2. It does not affect the foetus
3. Decreased maternal morbidity and mortality.

The incidence of Stillbirth rate is high which accounts for high perinatal mortality (as high as 10%).

In our study the incidence of stillbirth is 6%. Use of prophylactic forceps in severe hypertensives and liberal caesarean section (7%) can achieve further reduction in stillbirth rate.

References

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