

Study of Feto-Maternal Outcome in Patient with Pre-Eclampsia

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Abstract

Objective: To assess the feto-maternal outcome in subjects of severe PET. **Method:** This prospective descriptive study (case series) was carried out in department of obstetrics & gynecology, Govt. Medical College, New Civil Hospital Surat, enrolling 142 subjects with severe Pre-eclampsia (Severe PET) admitted in labour room at new civil hospital, surat over a period of two years from august 2010 to july-2012 & followed till discharge. **Summary:** This study was conducted at new civil hospital, surat enrolling subjects admitted with severe PET (n=142). The incidence of severe PET amongst our labour room admissions was 1.2%. All patient were given labetalol for control of hypertension, but labetalol alone was sufficient in 74.49% subjects and other anti-hypertensive were needed in 25% subjects. MgSO₄ sulphate prophylaxis was administered in 72 out of 142 subjects with severe PET- none of whom developed subsequent eclampsia. 66.9% delivered vaginally, 6.9% had assisted vaginal delivery while 26.1% had CS. Adverse maternal outcome was noted in 34% subjects, abruptio placenta was the commonest complication noted in 10.3% subjects and maternal mortality in 3.9% subjects. Adverse fetal outcome was seen in 11.8% subjects - prematurity accounting for 85.2% of the adverse fetal outcomes.

Conclusion: Maternal mortality and morbidity increases in subjects with severe pre-eclampsia so it is important for clinicians to educate women about the early warning sign of pre-eclampsia and to identify women with severe PET. Labetalol is an effective drug to control the severe hypertension noted in pre-eclampsia and MgSO₄ is very effective to prevent convulsion in severe PET.

Keywords: Pre-eclampsia, Labetalol, Maternal mortality

Introduction

India is among those countries which have a very high "Maternal Mortality rate" Hypertensive disorders complicating pregnancy are common and form one of the deadly triad along with haemorrhage and infection, that contribute greatly to maternal morbidity & mortality (13% of all maternal death).

Patho-physiological changes of hypertensive disorder begin to manifest early in pregnancy which progress across pregnancy till delivery & ultimately result in multi-organ involvement. These changes presumably are a consequence of vasospasm, endothelial dysfunction and ischemia. Any organ may be involved by these disease, but

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the main organs usually involved in a hypertensive pregnancy are placenta, kidney and brain.

With improved prenatal and antenatal care and rational approach management management, perinatal maternal morbidity and mortality is reduced dramatically as shown by various studies.

The Department of Obstetrics and Gynecology, Government Medical College, Surat is the largest referral center in South Gujarat catering to high risk obstetrics. 8.42% of patients that deliver here usually have hypertensive disease in pregnancy. this study was undertaken to assess fetal and maternal outcome in severe PET and eclampsia and to correlate the outcome to various responsible factors so as to enable us to draw out hospital policy for management of these cases to improve their outcome.

Aims & Objectives of Study

To assess the fetomaternal outcome in subjects of severe PET.

Methodology

Inclusion Criteria: All patient admitted with severe pre-eclampsia (diagnosed according to following criteria) to our labour room and OB-ICU between August-2012 to July-2012.

Criteria For Diagnoses of Severe Pet: All Pregnant women with BP >160/110 mmHg and Proteinuria > 2+ dipstick / >2g/24 hr with or without following abnormal investigations and symptoms:

- Serum creatinine \geq 1.2 mg/dl unless known to be previously elevated.
- Platelets < 100000 /cumm.
- Elevated alanine transferase or aspartate amino transferase.
- Micro angiopathichemolysis.
- Premonitory symptoms present.
- Fetal growth restriction present

Result & Discussion

Total no. of subjects with severe PET and eclampsia (percentage)

Table 1: Distribution according to demographic profile

Age (n=142)	
<20 years	12(8.4%)
20 to 30 years	110(77.3%)
>30 years	20 (14.3%)
Parity (n=142)	
Primigravida	90(63.5%)
Multigravida	52 (36.4%)
Gestational age at presentation (n=142)	
<20 weeks	0
20 to 28 week	22(15.8%)
28 to 36 week	99 (69.5%)
>36 week	21 (14.8%)
Registration status (n=142)	
Registered	26 (17.7%)
Unregistered	(82.3%)

Table 2: Distribution of variety of abnormality in investigation

No abnormal investigations noted	42(29.5%)
Abnormal investigations noted	100(70.4%)
Elevated ALT(>45IU/ml)	89(62.6%)
Decreased platelet counts(<1,00,000/ml)	77 (5.4%)
Elevated S. creatinine(>1.2 mg/ml)	56(39.9%)

Table 3: Distribution according to mode of delivery

Mode of Delivery	(n=142)
Vaginal	95(66.99%)
Assisted Vaginal	10(6.89%)
Caesarean section	37(26%)

Table 4: Distribution of variety of premonitory symptoms

Premonitory symptom	(n=142)
Premonitory symptoms present	142(100%)
Headache	120(84.7%)
Vomiting	98(68.9%)
Epigastric pain	54(37.9%)
Blurring of vision	7(4.9%)
Decrease urine output	84(5.9%)

Table 5: Treatment & Outcome

Control of hypertension (n=142)	
Labetalol was sufficient	106 (74.9%)
Other antihypertensive required	36 (25.1%)

Mgso4 prophylaxis against convulsions in severe PET(n=142)

Subjects with severe PET (n=142)	Subsequent convulsions noted
MgSO ₄ administered 72(50.7%)	0
MgSO ₄ not administered 70(49.29)	26(37.1%)

Table 6: Maternal Outcome (n=142)

Normal maternal outcome	93 (66%)
Adverse maternal outcome	49 (34%)
Variety of adverse maternal outcomes n=49(34%)	
Abruptio placenta	18 (12.5%)
Acute renal failure	6 (4.2%)
Disseminated intravascular coagulation	15 (10.4%)
Cerebral haemorrhage	4 (2.7%)
Hellp syndrome	0
Mortality	6 (4.2%)

Table 7: Fetal Outcome (n=142)

Normal fetal outcome	17 (11.8%)
Adverse fetal outcome	125 (88.2%)
variety of adverse fetal outcomes n=125	
Prematurity	106 (85.2%)
Intrauterine growth restriction (IUGR)	20 (16.2%)
Intrauterine uterine fetal death (IUFD)	18 (14.7%)
Meconium aspiration syndrome (MAS)	11 (0.9%)
Respiratory distress syndrome (RDS)	31 (24.6%)
Birth asphyxia	58 (46.3%)
NICU admission	77 (61.8%)
Early neonatal death	31 (24.6%)

Conclusion

Maternal mortality and morbidity increases in subjects with severe pre-eclampsia, so it is important for clinicians to educate women about the early warning sign of pre-eclampsia and to identify women with severe PET.

Labetalol is an effective drug to control the severe hypertension noted in pre-eclampsia.

MgSO₄ as anticonvulsant is effective to prevent convulsion in severe PET.

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