



Expectant Vs Active management of severe preeclampsia in 30-34 weeks – maternal and fetal outcome

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ABSTRACT

Aims and Objective

To compare the maternal and fetal outcome in severe PIH patients presenting between 30 – 34 weeks managed conservatively till 34 weeks and terminated actively between 30 – 34 weeks.

Materials and Methods –

It is a observational comparative study conducted in a tertiary government hospital, with a sample size of 100 patients with severe preeclampsia between 30 to 34 weeks. Patients who fulfill the inclusion and exclusion criteria are included in the study. Details of the plan of treatment and the indication and mode of termination are noted. Maternal and fetal followup are done upto discharge of death.

Results

There is no statistical significance between active and expectant management with regard to maternal morbidity. The reasons for termination were maternal for 58% of the patients and were fetal indications for 42% of the patients. The expectant management has a significant effect on the fetal outcome. Babies born of expectant management have better chance of survival than managed actively. There is significant weight gain for babies in the expectant group.

Conclusion

The expectant management of severe preeclampsia results in good fetal outcome for higher birth weight, lower perinatal mortality and lesser neonatal complications. But this must be weighed against the risk of maternal morbidity.

KEYWORDS

Severe preeclampsia, PIH, Expectant management, Active management.

Introduction

Pre eclampsia is described as a rise in blood pressure and proteinuria which is of new onset, occurring after 20th week of gestation. It is described as severe pre eclampsia if there is end organ damage and substantial increase in blood pressure and proteinuria or the occurrence of symptoms. Preeclampsia is considered early onset if elevation of blood pressure and proteinuria occurs before 34th week of pregnancy.

Optimising the timing of delivery involves striking a balance between the benefits and risks of pregnancy prolongation compared with those of induction or elective Caesarean delivery. Birth of the baby is always in the best interest of the woman¹. For her, pregnancy prolongation has no direct benefit, but for the baby, the benefits may be large at gestational ages remote from term. This can be a heart-wrenching decision for families and their care providers.

When considering timing of delivery, the decision must be made between delivery (i.e., active) vs and pregnancy prolongation (i.e., expectant care)².

'active management', 'aggressive management', or 'early delivery': Childbirth by either induction of labour or Caesarean delivery before or after antenatal corticosteroids have been given to improve fetal lung maturation, which in practice, is after 24–48 hours depending upon the condition of the mother.

Expectant care: Administration of corticosteroids to improve fetal lung maturation, stabilisation of the woman's condition and then, if possible, delay of childbirth. The goal of expectant management is to achieve fetal maturation in utero, thereby preventing or minimising complications associated with prematurity; there are no maternal benefits to expectant management.

A decision to proceed with expectant management follows a

period of maternal and fetal observation, assessment and maternal stabilisation. The latter may involve control of maternal blood pressure, magnesium sulphate for eclampsia prophylaxis (among women with pre-eclampsia), and corticosteroids to accelerate fetal pulmonary maturation if delivery is anticipated within the next 7 days and current gestational age is 34+6 weeks³. Expectant management with inpatient monitoring of maternal and fetal status may improve perinatal outcomes.

Ideally, candidates for expectant management are women who have been appropriately counselled, have made an informed choice for expectant management, have a viable fetus that is less than 37+0/7 weeks' gestational age, and have no contraindications to expectant management. Although lists have been published of indications for delivery in pre-eclampsia, criteria will vary based on gestational age.

These women have indications for delivery that are consistent with expert opinion and study protocols^{4,5}:

- Eclampsia or another serious maternal complications associated with pre-eclampsia⁵ Severe end-organ complications
- Uncontrolled severe maternal hypertension
- Intrauterine fetal demise
- Fetal compromise that would be an indication for delivery in general obstetric practice (e.g., reversed end-diastolic flow in the umbilical artery)⁶

Materials and Methods

This is a observational comparative study conducted in 100 women in a tertiary care institute from July 2015 to June 2016. Patients were selected based on Inclusion and exclusion criteria.

Inclusion criteria

Patients of age group 18 to 35 diagnosed as severe preeclampsia with blood pressure under control.

Exclusion criteria for expectant management (at the time of diagnosis)

1. Uncontrolled hypertension with antihypertensives
2. Signs of imminent eclampsia
3. AP eclampsia
4. Abruptio placenta
5. Deterioration of renal function, liver function
6. Oliguria
7. HELLP syndrome
8. Abnormal fundus examination
9. IUGR
10. Abnormal Doppler study

The patients categorised into two groups

Group 1 – 50 patients with severe preeclampsia presenting between 30-34 weeks terminated actively.

Group 2 – 50 patients with severe preeclampsia, managed conservatively till 34 weeks provided BP is under control and with normal liver, renal function.

All pregnant women attending AN OPD are screened for hypertension. Patients with severe PIH with BP - >160/110, urine albumin >+2 are hospitalised. A through clinical examination and routine investigations are taken. Treatment included rest, antihypertensive for BP control, Inj Dexamethasone 6mg course for fetal lung maturity. Maternal complications in both groups are compared. Fetal outcome in both groups including birth weight, incidence of NICU admissions are compared in both groups.

Results and Discussion

Maternal age varied from 18 – 36 years with the mean age group being 26 years. Incidence of PIH is more common among Primi (62%). Mean gestational age of women included in the study was 31 weeks.

The gestational age at delivery for the expectant management group was at 30-32 weeks for 34%(17) and 32-34 weeks 66%(33). The gestational age at delivery for active management group was at 30 – 32 weeks was 58% (29) and 32 – 34 weeks was 42% (21).

Steroid injection was given for all mothers in expectant management group whereas only 66% was given in active group.

The reasons for termination were maternal for 58% of the patients and were fetal indications for 42% of the patients.

Out of the 100 women included in the study 65 had vaginal delivery – expectant group (31) and active group (34). Caesarian delivery was performed in 35 women 19 from expectant group and 16 from active group. The P value was 0.53 (insignificant). Hence the mode of delivery has no significant influence over the fetal and maternal outcome.

Maternal outcome

In our study there was no maternal mortality. (Table 1)Maternal morbidity was seen in 30% patients. 17 in expectant management and 13 in active management. Abruption was the highest accounting to 9 patients followed by eclampsia in 7 patients. The P was 0.923. There is no statistical significance between active and expectant management with regard to maternal morbidity. The mode of management has no influence over maternal outcome.

Table 1

	Expectant	Active	Total
Abruption	4(23.5%)	5 (38.5)	9 (30%)
Acute Kidney Injury	2 (11.8%)	1 (7.7%)	3 (10%)
Anterpartum eclampsia	3 (17.6%)	2 (15.4%)	5 (16.7%)

DIC	1 (5%)	0	1 (3.3%)
HELLP syndrome	2 (11.8%)	2 (15.4%)	4 (13.3%)
Intrapartum eclampsia	1 (5.9%)	0	1 (3.3%)
Postpartum eclampsia	1 (5.9%)	0	1 (3.3%)
PRES	1 (5.9%)	1 (7.7%)	2 (6.7%)
Pulmonary edema	2 (11.8%)	2 (15.4%)	4 (13.3%)
Total	17 (100%)	13 (100%)	30 (100%)

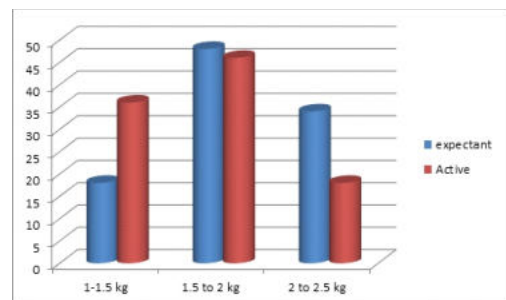
Table 2

Outcome	Expectant	Active	Total
Live	45 (90%)	44 (88%)	89
Still birth	2 (4%)	4 (8%)	6
IUD	3 (6%)	2 (4%)	5
PND	5 (10%)	13 (26%)	18
Total	50 (100%)	50 (100%)	100

The number of babies requiring NICU admission in expectant management group was 33 (66%) and in active management was 40 (80%).

The babies delivered by expectant management have higher mean birth weight (1.89 kg) than those actively delivered group – 1.66 kg. The P value is 0.064. There is significant weight gain for babies in the expectant group (Figure 1)

Figure 1



Active and the expectant management groups did not have much of impact on the contribution to the apgar group.

The mean number of days gained during the expectant management was 6.8 days. The maximum number of days gained was 24. (Figure 2)

Figure 2



Conclusion

Severe preeclampsia is associated with significant maternal and fetal complications. Decision regarding pregnancy termination is to be taken on the grounds of both maternal and fetal factor. The expectant management of severe preeclampsia results in a good fetal outcome for

- 1) Higher birth weight.
- 2) Lesser neonatal complications

But this must be weighed against the risk of maternal morbidity. Hence they should be carried out only in a tertiary care center

where there are senior obstetricians and neonatologist available.

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