

PIH-confounding Situations, Management Dilemmas and Severe Consequences : Does Antenatal Care have A Role?

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Abstract

- 1) PIH more commonly affects women of less than 25 years of age.
- 2) Incidence of PIH can not be lessened by better standard of antenatal care. However, the severity and complications of the same can certainly be reduced by proper antenatal care.
- 3) Mode of presentation of severe PIH to be as follows
 - i. oedema – 54%
 - ii. Headache – 30%
 - iii. Blurring of vision – 2%
 - iv. Oliguria – 2%
- 4) One patient died during the course of study cause of death being DIC. This was in ANC non registered patient.
- 5) Maternal complications were observed only in ANC non registered patients.
- 6) Termination of pregnancy before 32 weeks of pregnancy was found only in ANC non registered patients.
- 7) Neonatal mortality and morbidity with NICU admission significantly found in ANC non registered patients compared to ANC registered patients.

Introduction

Preeclampsia / eclampsia is an unpredictable, multiorgan disorder unique to human pregnancy. It is associated with significant maternal and foetal morbidity and mortality worldwide. Treatment of this disorder still remains a challenge to even the most experienced obstetricians, mainly because exact aetiology is unknown. Many of the causal theories attributed to preeclampsia describe pathological features of clinical presentation which are the result rather than the cause of the disease process.¹ It has been thought to be neurological, renal, hepatic, hypertensive and most recently placental disorder. The truth is that it is probably all

these things in different people and is certainly more than just hypertension in pregnancy.²

Epidemiological studies, report that hypertension complicates 10% of all pregnancies. In USA 7-10% of all pregnancies are complicated by PIH, while in South Africa, PIH is found in 18% of all pregnancies and eclampsia in 0.9% of cases.³ In India incidence of PIH among hospital patient is about 7-10% of all antenatal admissions and that of eclampsia is 0.94-1.8%.⁴ Further hypertensive disorders of pregnancy are major factors in perinatal morbidity and mortality.

Once the diagnosis of severe preeclampsia is established, the only cure is termination of pregnancy. Management is directed towards an attempt to achieve foetal maturity while preventing maternal complications. The

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main risks to the foetus are IUGR and iatrogenic interference resulting in preterm delivery.

Unfortunately there is no one test that can be relied upon to confirm the diagnosis, but by accurately measuring the blood pressure, quantifying the proteinuria and serially monitoring the haematological and biochemical parameters appropriate evaluation is possible. Suitable early intervention is often required to prevent life threatening complications.

Keeping the above factors in mind we started the following study in our hospital

Aims and Objectives

1. To evaluate incidence of life threatening complications in severe preeclampsia, comparing ANC registered and ANC unregistered patients
2. To evaluate need for iatrogenic termination of pregnancy in these groups.
3. To assess whether ANC care by itself is an independent factor in prognosis
4. To assess clinical presentation and warning signs of pre-eclampsia in our population.
5. To assess maternal and foetal morbidity and mortality in a tertiary care centre.

Material and Methods

This is a prospective observational study conducted on 100 patients of severe preeclampsia in a tertiary care institute in Mumbai

Inclusion criteria

- 1) BP > 160/110 mmHg on admission
- 2) BP > 140/90 mmHg with signs and symptoms of severe PIH i.e headache, blurring of vision, epigastric pain, oliguria, IUGR, anaemia.
- 3) Eclampsia

- 4) HELLP
- 5) Chronic H.T. with superimposed PIH.

Exclusion criteria

- 1) Neurological disorder
- 2) BP \geq 140/90 mmHg without signs and symptoms of severe PIH
- 3) Chronic hypertension (BP \geq 140/90 mmHg before pregnancy or diagnosed before 20 weeks of gestation)
- 4) Patients suffering from hepatitis or cardiac disease
- 5) Patients suffering from diabetes mellitus, thyrotoxicosis, connective tissue disorders (SLE)

Management Protocol

Patients fulfilling the inclusion criteria were admitted in emergency ward are managed as :-

The patients who require urgent termination of pregnancy-

Maternal causes

- i) Eclampsia
- ii) DIC
- iii) HELLP syndrome
- iv) ARF
- v) Abruptio placentae
- vi) Pulmonary oedema

Foetal causes

- i) Abnormal Colour Doppler findings
- ii) Poor BPP
- iii) Non reactive NST/IPM
- iv) IUFD

Patients who could be managed conservatively

- These patients were shifted to antenatal care ward and kept under closed monitoring.

- At any time if there is worsening of maternal or foetal condition then pregnancy is terminated.
- In the ward patient was monitored for
 - BP (6 hrly)
 - Proteinuria (12 hrly)
 - Daily weight gain
 - Strict u/o charting
 - Daily foetal kick count
 - Fundal height in cm (wkly)
 - Blood investigations like platelets, LFT, RFT done biweekly.
 - Alternate day NST
 - USG with BPP

The antihypertensive used to control BP were-

- T Aldomet (α -methyl dopa)
- C. Depin (Nifedipine)

If early termination of pregnancy is expected then glucocorticoids, in the form of Inj. Dexamethasone (1.2 mg) IM, two dose 12 hours apart were given for gestations less than 34 weeks

- Postpartum, careful monitoring for complications was maintained.
- Antihypertensive were tapered as per response.
- For any complications like ARF, HELLP, DIC patients were shifted to medicine intensive care unit.
- Babies were examined by paediatricians and shifted to NICU when indicated.

Stepwise management of any severe preeclampsia patients should follow following steps

- Screening
- Assessment of maternal well being
- Assessment of foetal well being

- Stabilization of maternal disease
- Use of antihypertensive agents
- Anticonvulsant therapy
- Planned delivery

Continued postpartum care

Results and Analysis

Tables 1 - 4 and Figs. 1 - 4

Table 1 : Mortality And Morbidity

<i>Mortality</i>	Maternal		Neonatal	
	Morbidity		Mortality	Morbidity
1 pt	4 pt ICU admission		10 pt	16 pt NICU admission (2 nd pt MTP 8 pt)

Table 2 : Gestational age at termination of pregnancy

Gest age	ANC regd	ANC unreg	Total	%
< 28 wks	—	8	8	8%
28-32 wks	—	6	6	6%
32-37 wks	4	6	10	10%
> 37 wks	6	8	14	14%

Table 3 : Neonatal morbidity

Complications	ANC Regd	ANC Unregd
Meconium aspiration	2	4
Septicaemia	2	—
RDS	0	4
Convulsions	—	2
Neonatal jaundice	—	2
Total	4	12

Table 4 : Neonatal mortality

Complications	ANC Regd	ANC Unregd
Meconium aspiration	—	2
Septicaemia	2	—
RDS	—	2
DIC	—	4
Total	2	8

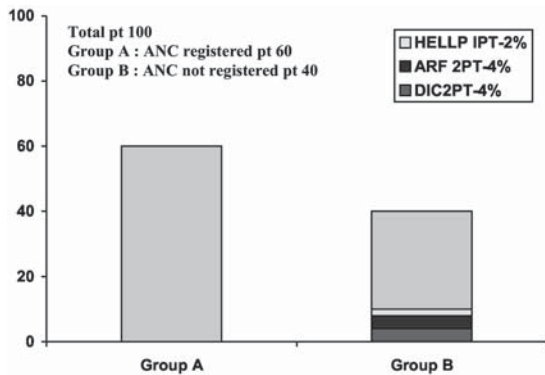


Fig. 1

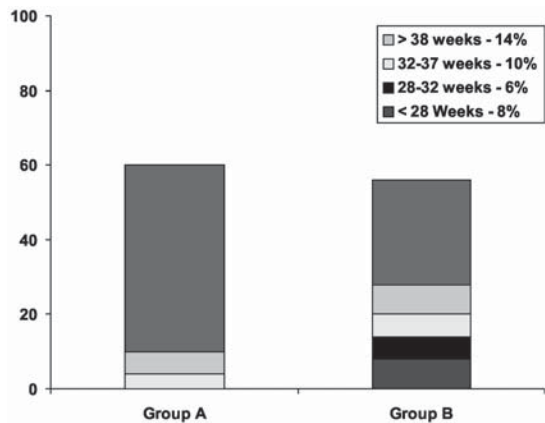


Fig. 2

Conclusion

In any pregnancy there are two potential patients, the mother and her foetus. Preeclampsia / eclampsia is associated with significant maternal and foetal morbidity and mortality worldwide. Primigravida and younger woman are more likely to suffer from this condition. Earlier the onset of the disease and more its seniority worst the outcome for a mother and neonate.

All severe pre-eclampsia and eclampsia should be managed in special regional centres with the appropriate expertise. While prevention of preeclampsia / eclampsia must await on understanding of its aetiology, improvement in antenatal care, together with active management of the disease when it

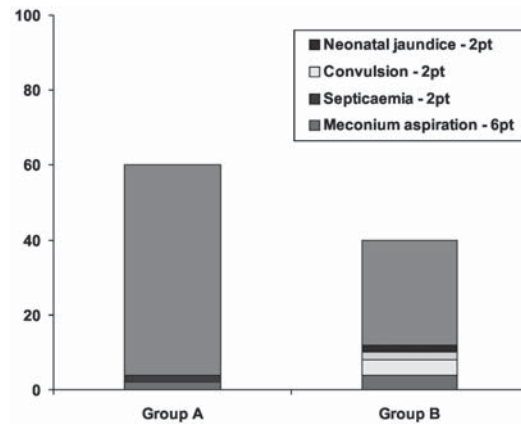


Fig. 3

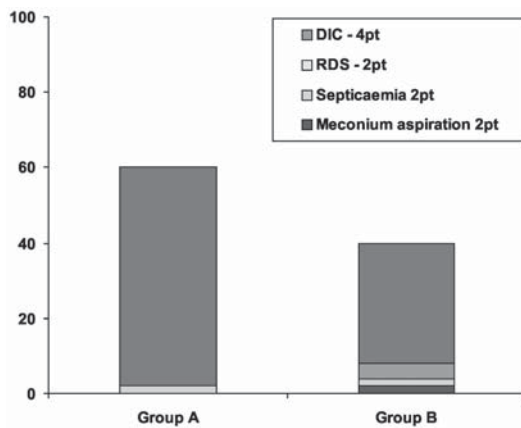


Fig. 4

develops, will improve both foetal and maternal prognosis

References

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