



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

STUDY OF FETO-MATERNAL OUTCOME IN PREGNANCY INDUCED HYPERTENSION.”

KEY WORDS: Pregnancy induced hypertension, maternal demographic variables, clinical symptomatology and investigations for PIH, maternal and fetal outcome in PIH.

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ABSTRACT

BACKGROUND: The objective of this study was to study various parameters of PIH, maternal and fetal outcome in PIH.
METHODS AND MATERIALS : A prospective study of 200 randomly selected cases of PIH in 2 years at tertiary care center. All cases were selected on who basis of pregnancy beyond 28 weeks, singleton pregnancy with cephalic presentation admitted in our hospital.
RESULT : In present study of 200 cases of PIH, majority of patients were between 21 to 25 years ,highest with primigravida .oedema feet & headache were common presenting symptoms with maximum changes in renal function test followed by liver function test .doppler changes were maximum seen in uterine artery followed by umilical and fetal MCA. overall perinatal mortality was 13% and meternall mortality was 0.5%.
CONCLUSION : Pregnancy induced hypertension is a disease of unknown etiology. Provision of quality antenatal health care services , increasing patients awareness and intensive monitoring in the intrapartum and postpartum Period have potential to improve maternal and perinatal outcome.

INTRODUCTION

Hypertensive disorders in pregnancy remain among the most important unsolved problem in obstetrics despite decades of intensive research. Worldwide and in developed countries 16% of maternal deaths were reported to be due to hypertensive disorders. Fetal morbidity and mortality is directly related to severity of hypertension and associated co morbidities. Timely screening and management of Pregnancy induced hypertension reduces fetomaternal complications. Hence, there is a need to asses aetiology, risk factors, complications, and to establish management protocols to reduce fetomaternal complications.

AIMS AND OBJECTIVES

1. To study various maternal demographic variables in cases of Pregnancy Induced Hypertension.
2. To study the clinical, laboratory, and ultrasonographic doppler parameters in cases of Pregnancy Induced Hypertension
3. To study the modalities of treatment and maternal and fetal outcome in Pregnancy Induced Hypertension.

METHODS AND MATERIALS

This prospective observational study has included 200 randomly selected patients with Pregnancy induced hypertension who were admitted for confinement at the Department of Obstetrics and Gynecology, in our tertiary care teaching institute between September 1, 2018 to August 31, 2019 . Patients with pregnancy induced hypertension, fulfilling following case selection criteria were included.

A. Inclusion criteria- Pregnancies beyond 28 weeks of gestation, Singleton pregnancy with cephalic presentation, Patients who delivered at our hospital and who were willing to participate in our study

B. Exclusion criteria- Pregnancies below 28 weeks of gestation, Patients with chronic hypertension (before 20 weeks of gestation), Pregnancy with malpresentation, Patients who were not willing to participate in our study, Patients who delivered outside our hospital.

All patients were selected by predetermined proforma included detail history, examination and investigations.

OBSERVATION AND DISCUSSION

This prospective observational study has included 200 randomly selected patients with Pregnancy induced

hypertension who were admitted for confinement at the Department of Obstetrics and Gynecology, in our tertiary care teaching institute between September 1, 2018 to August 31, 2019. All data were collected, tabulated and analysed as follow:

Table-1. Distribution according to demographic profile of patients and clinical Symptomatology.

Criteria	Gravida				
	<20	21 to 30	>30	Primi	multi
No. of Patients	25	153	22	104	96
Percentage	12.5%	76.5%	11.0%	52%	48%
SaxenaN/pillaiSS et al (2016)/(2017)	05.3	68.14	25.3	60.90	39.10
Symptoms	No. of Patients		Percentage		
Oedema feet	76		38.0%		
Headache	59		29.5%		
Nausea/Vomiting	10		05.0%		

PIH is more common in primigravida patient because of exposure to chorionic villi for the first time⁶. most common symptoms are oedema feet followed by headache³.

Table-2 Hematological investigations and Doppler changes in Pregnancy induced hypertension (excluding stillbirth).

Out of 191 no of cases 157 cases showed positive dopler findings .

INVESTIGATIONS	Present study	PillaiSS et al
Renal Function Tests	S.creat >1.2	89(44.5%) 15.45%
	BUN>40	63(31.5%) 13.63%
	S. UA>7	62(31.0%) 15.45%
Liver Function Tests	S.Bili >1.2	64(32.0%) 14.56%
	SGPT >70	65(32.5%) 19.09%
	SGOT >70	65(32.5%) 19.09%
Cogulation study	Platelets <1,00,000	16(08.0%) 14.54%
	AlteredPT, INR	11(05.5%) 16.30%
Abnormal doppler findings	Uterineartery	152 (79.58%) 69.46%
	Umbilicalartery	121(63.35%) 34.02%
	MCA	49(25.65%)0 60.17%

MCA chages combined with abnormal uterine and umbilical artery abnormality was less common^{4,5}.

Table-3. Anti-hypertensive used in Present study

Anti hypertensive Drug		Present study	pillaiSS et al
Labetalol	Oral	90.5%(181)	28.18%
	I.V	31.0%(062)	-
Nifedipine (oral)		02.5%(005)	39.09%
Labetalol+Nifedipine		07.0%(14)	24.54%
Methyl dopa		00.0%(00)	-

Labetalol was the most commonly used drug in present study, either singly (90.5%) or in combination with nifedipine (7 %) as per Departmental protocol. Labetol is an α - blocker with non-selective β blocking properties. Magnesium sulphate was prophylactically given to 43 patients with severe hypertension and therapeutically to 5 patients after the occurrence of eclampsia as per Pritchard regimen.

Table-4. Maternal complications and outcome in present study

In present study 27 patients had normal vaginal delivery whereas 73% Caesarean rate is high in PIH patients as timely caesarean section reduces fetomaternal complications.

Complication	Present study	PillaiSS et al
PPH	12(6.0%)	23.63%
Abruption	07(3.5%)	07.27%
Eclampsia	05(2.5%)	11.81%
DIC	04(2.0%)	02.72%
AKI	04(2.0%)	07.27%
HELLP SYN.	03(1.5%)	23.63%
Infection,Septicemia	02(1.0%)	-
Pulmonary edema	-	00.90%
ARDS	-	-
Mortality	01(0.5%)	0%

Atonic PPH was the commonest complication and it was managed by uterine ecbolics. Bilateral uterine and ovarian artery ligation was needed in 6 cases. In present study, maternal mortality was 0.5% (1 case) and it was because of DIC, Abruption and Acute renal failure.

Table-5. Relation of severity of hypertension with birth weight and perinatal loss:

Severity of hypertension	Birth weight <2.5kg (N= 41+37=78)		Birth weight >2.5kg (N=96+26=122)	
	Live(carry home)	PNM	Live(carry home)	PNM
Mild (N=41+96=137)	32 (16%)	09 (4.5%)	94 (47%)	02 (1%)
Severe (N=37+26=63)	22 (11%)	15 (7.5%)	26 (13%)	00 (0%)

Perinatal mortality increases with low birth weight and severe hypertension^{6,7,8}.

Table-6. Causes of early neonatal death in NICU admitted babies in present study

Causes	NO OF EARLY NEONATAL DEATH(n=17)
Prematurity	08
IUGR	06
MAS	01
ARDS	02

Prematurity and IUGR were common causes for early neonatal death.

Perinatal mortality can be improved with appropriate and timely antepartum as well as intrapartum management along with supportive neonatal intensive care facilities.

In present study maternal mortality was seen in 1 case (0.5%). Cause of death was DIC and acute renal failure, following abruption placenta. Appropriate antihypertensive and anticonvulsant therapy, supportive care facilities including obstetric ICCU care and availability of blood and blood products as well as combined medical and obstetric

approach at tertiary care centre are the main reasons for decreased maternal morbidity and mortality⁹.

CONCLUSION

Female sterilization, typically accomplished by means of tubal ligation is widely used method of contraception that is highly effective at preventing unintended pregnancy. In all developed countries sterilization is generally performed by laparoscopic equipment, minilaparotomy by modified pomyer method may still be the most common approach. Though both methods are widely used, the advantages and disadvantages of laparoscopic sterilization compared to minilaparotomy have not seen systematically evaluated. Sterilization is safe, cost effective, permanent form of contraception that is more common among women than men and most popular method of contraception in India. Sterilization has 67.3% share of birth control methods used by India significantly higher proportion than other countries with similar demographics.

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