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Pregnancy induced hypertension: A reterospective study of 200 cases of pregnant women

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Abstract: *Preeclampsia and eclampsia are important cause of maternal and perinatal morbidity and mortality in the developing countries. The incidence of Pregnancy induced hypertension (PIH) in India ranges from 5-15%. The incidence of PIH in primigravidae is 16% and 7% in multigravidae. Primary pre-eclampsia occurs in 70% of PIH cases and secondary pre-eclampsia occurs in 30% in all PIH cases.*

Material and methods*: This is study done in all the pregnant women admitted in year 2015 (1806 patients) attending antenatal clinic and emergency and 200 cases with pregnancy induced hypertension were studied according to severity and analysed for complications and foetal and maternal outcome.*

Results: *There was found to be that still eclampsia and severe PIH contribute significantly to foetal and maternal morbidity and mortality.*

Keywords: *Preeclampsia, eclampsia, gestational hypertension, Pregnancy induced hypertension, pregnancy.*

I. Introduction And Review of Literature

Preeclampsia and eclampsia are still an important cause of maternal and perinatal morbidity and mortality in the developing countries. (1) Gestational hypertension is usually defined as having blood pressure higher than 140-90 mm of Hg without the presence of proteins in urine and diagnosed after 20th week of gestation. Pre-eclampsia is gestational hypertension (blood pressure higher than 140-90 mm of Hg) plus protienuria (> 300 mg of protein in a 24 hr urine sample). Severe pre-eclampsia involves a blood pressure higher than 160-110 mm of hg, with additional medical signs and symptoms. It is referred to eclampsia when tonic clonic seizures appear in pregnant women with high blood pressure and protienuria. HELLP syndrome is referred to as a dangerous combination of three medical conditions: Haemolytic anaemia, elevated liver enzymes and low platelet count and it can complicate PIH. (2)

In order to classify the hypertensive conditions of pregnancy, an arbitrary divide is made around 20th week of gestation. The woman who is found to be hypertensive prior to 20th weeks is said to have chronic or pre-existing hypertension in the absence of other pathology unrelated to pregnancy. Pregnancy induced hypertension (PIH) more common lt occurs during first pregnancies, it can also occur in subsequent pregnancies. PIH is more common in pregnant teens and in woman over age of 40 yrs. Many a times, PIH develops during second half of pregnancy, usually after 20th week, but it can also develop at the time of delievery or right after delivery. The incidence of Pregnancy induced hypertension (PIH) in India ranges from 5-15%. The incidence of PIH in primigravidae is 16% and 7% in multigravidae. Primary pre-eclampsia occurs in 70% of PIH cases and secondary pre-eclampsia occurs in 30% in all PIH cases.(4)Foetal complications of preeclampsia and eclampsia include the risk of preterm delivery, oligohydramnios (low fluid volume within the uterus), and sub-optimal foetal growth. Maternal complications of preeclampsia and eclampsia include bleeding and clotting disorders, and HELLP syndrome.

The exact cause of preeclampsia and eclampsia is not fully understood, (5) but it is believed to be a disorder of the lining of blood vessels. Abnormalities of the placenta have also been described. It likely arises due to a combination of factors, including both genetic and environmental influences. There is no cure for preeclampsia and eclampsia other than delivery of the baby. The decision about whether to induce labour or perform a Caesarean section depends upon the severity of the condition, as well as the gestational age and health of the foetus. Women with mild preeclampsia are often induced at 37 weeks' gestation. Prior to this time, they can be managed at home or in the hospital with close monitoring. During this time steroid drugs may be given to promote maturation of the baby's lungs. Women with mild preeclampsia prior to 37 weeks gestation are often prescribed bed rest with frequent medical monitoring. In severe preeclampsia, delivery (induction of labour or Caesarean delivery or C-section) is usually considered after 34 weeks of gestation. The risks to the mother and baby from the disease must be balanced against the risk of prematurity in this case. Intravenous magnesium sulphate can be given to women with severe preeclampsia to prevent seizures. This medication is safe for the baby. Oral supplements containing magnesium are not effective in preventing seizures and are not

recommended. Medications such as hydralazine to lower blood pressure may also be given. Eclampsia is a medical emergency. It is treated with medications to control seizures and maintain a stable blood pressure with the goal of minimizing complications for both mother and baby. Magnesium sulphate is used as a first-line treatment when eclamptic seizures do occur. If the seizures are not controlled by magnesium sulphate, other medications such as lorazepam (Ativan) and phenytoin (Dilantin) can be administered. There is no way known to prevent preeclampsia and eclampsia. However, the outcome can be improved with prompt recognition and management, so it is important for pregnant women to have routine health screenings. Most women with mild preeclampsia have good pregnancy outcomes. Eclampsia is a serious condition with about a 2% mortality (death) rate. (6, 7, 8)

The recurrence risk for preeclampsia varies according to the onset and severity of the condition. Women with severe preeclampsia who had an onset of the condition early in pregnancy have the highest recurrence risk. Studies show recurrence rates of 25% to 65% for this population. Only 5% to 7% of women with mild preeclampsia will have preeclampsia in a subsequent pregnancy.

Aims and objectives

The study is planned to evaluate the patients of pregnancy induced hypertension and evaluate maternal and foetal outcomes in these patients according to severity of PIH.

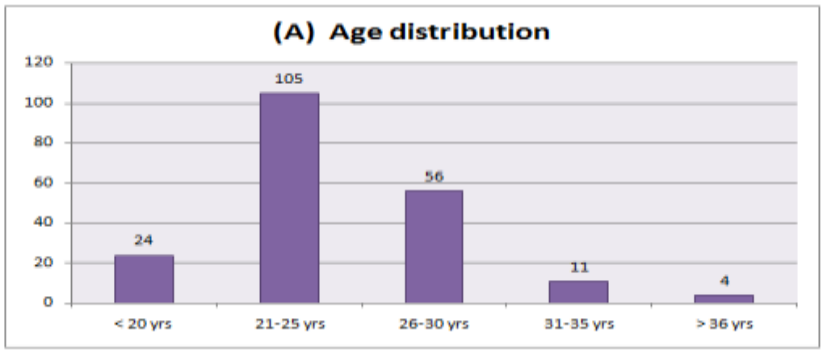
II. Material And Methods

The present study was carried out in the Department of Obstetrics and Gynaecology, in pregnant women admitted in Bebe Nanki Mother and Child Care Center, Government medical college, Amritsar in year 2015. This study was carried out in 200 pregnant women suffering from pregnancy induced hypertension admitted through antenatal clinic as well as in emergency and data analysed for maternal and foetal outcome.

Observations

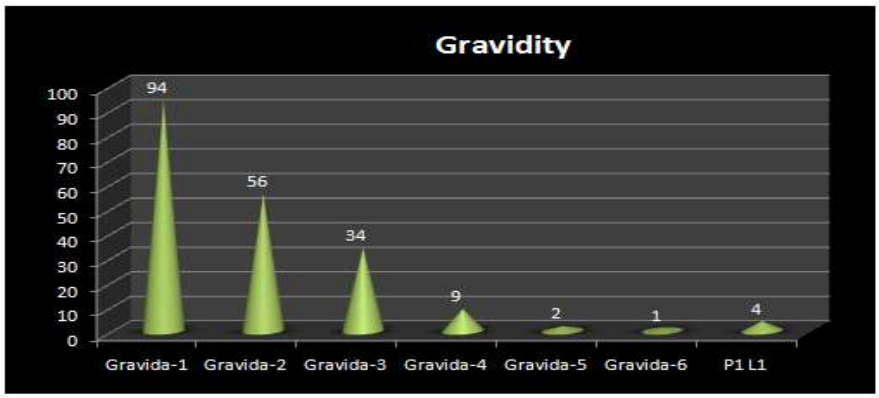
A. Age distribution

Out of 200 pregnant women with PIH, 105 (52.5%)women were between 21-25 yrs,56 (28%) were between 26-30 yrs, 24(12%) were less than 20 yrs, 11(5.5%) between 31-36yrs and 4(2%) abve 36 yrs.



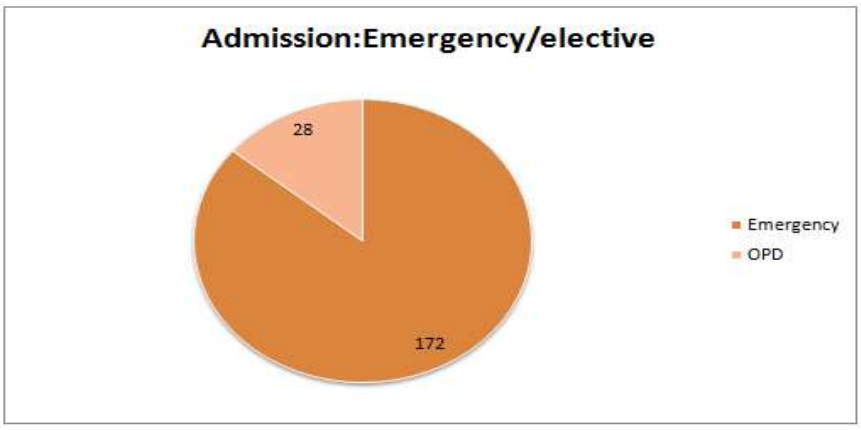
B. Gravidity

94(47%) pregnant women with PIH were primigravidae, 56(28%) were 2nd gravida, 34(17%) were 3rd gravida, 9(4.5%) 4th gravid, 3(1.5%) more than G-4.



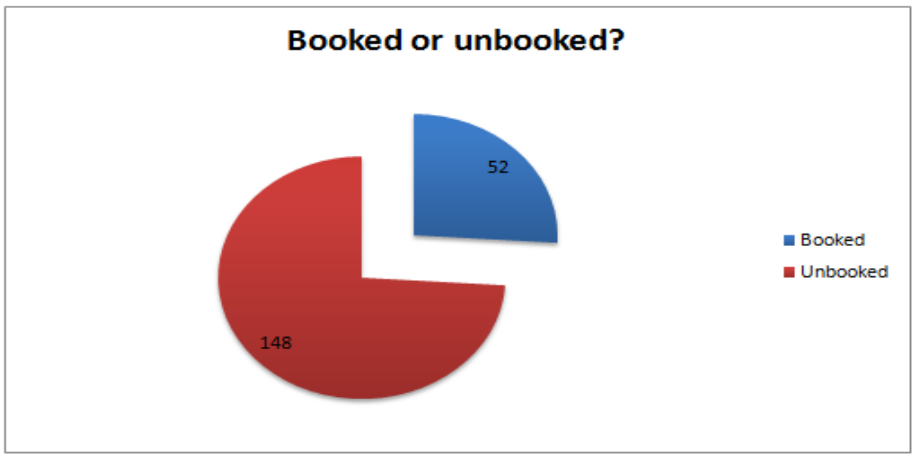
C. Admission (Emergency/O.P.D)

Most of the pregnant women with PIH were admitted through emergency i.e. 172 out of 200 (86%) and 28(14%) women admitted through O.P.D.



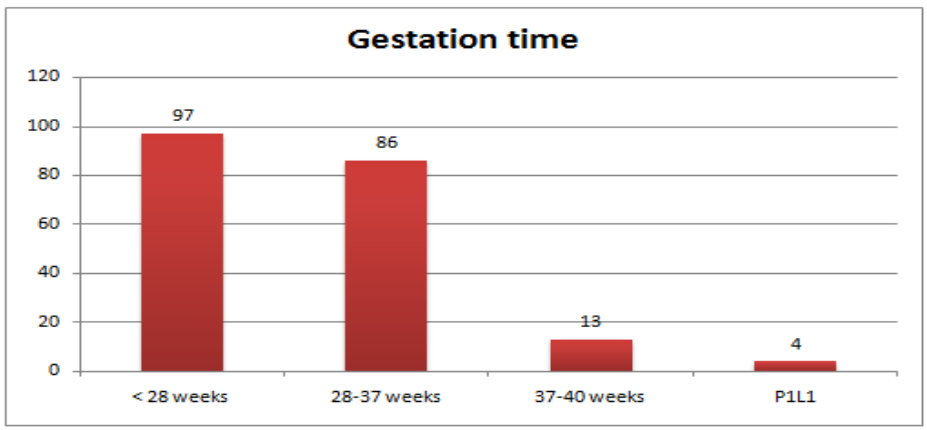
D. Booked or unbooked cases

148 (74%) of the pregnant women with PIH came directly in emergency and antenatal clinic as unbooked cases and 52(26%) cases were booked or registered cases at various institutions.



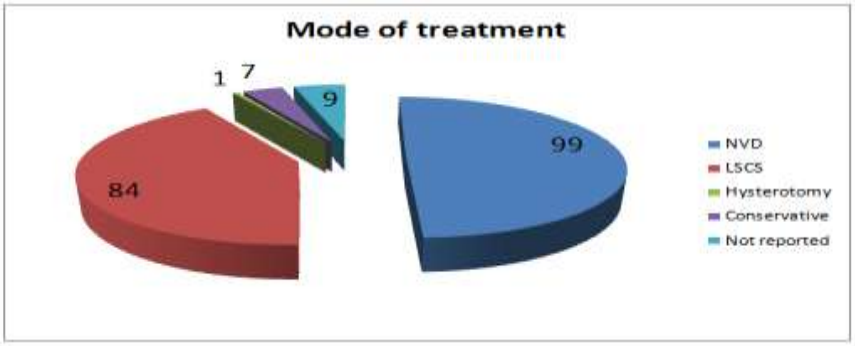
E. Gestation time

97 (48.5%) pregnant women with PIH were having gestation time less than 28 weeks, 86(43%) of pregnant women with PIH were gestation time between 28-37 weeks, 13 (6.5%) of pregnant women with PIH were gestation time between 37-40 weeks, 4 (2%) of women with PIH were P1L1.



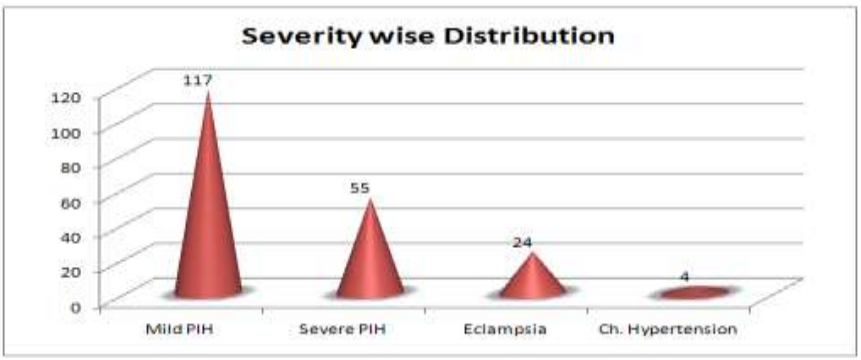
F. Mode of treatment:-

99 (49.5%) of pregnant women with PIH were delivered by normal vaginal delievery,84 (42%) of pregnant women with PIH underwent caesarean section for various causes, 1 pregnant patient with PIH underwent hysterotomy,7 patients were treated conservatively and 9 patients did not report in the ward or left against medical advice.



G. Severity wise Distribution

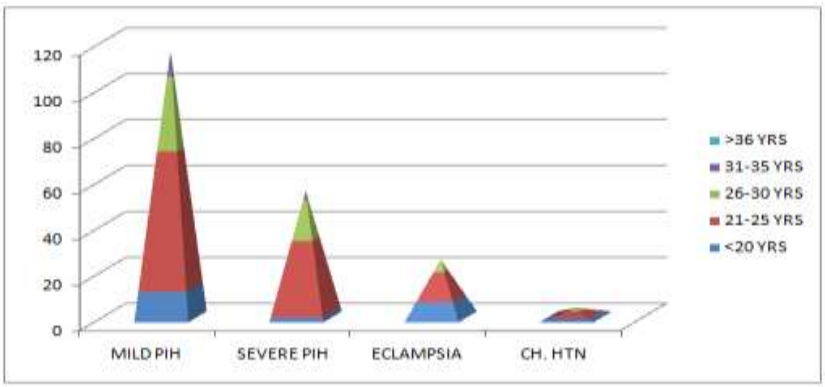
Out of 200 pregnant women admitted for PIH, 117(58.5%) were categorised as having mild PIH, 55(27.5%) were labelled as cases of severe PIH, 24(12%) women presented with eclampsia and 4(2%) had chronic hypertension.



Pregnancy induced hypertension and various parameters

A. Age of patients 80.5% of the patients with PIH fell in the age group of 21-30 yrs.

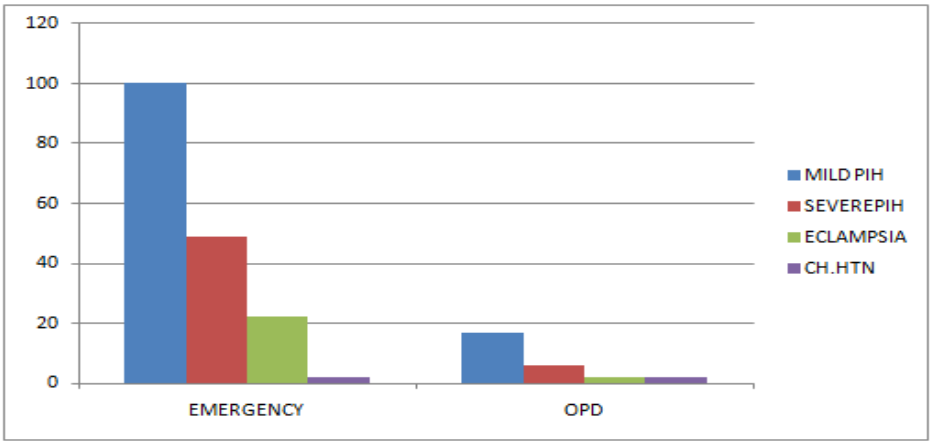
		MILD PIH (117)	SEVERE PIH (55)	ECLAMPSIA (24)	CH. HYPERTENSION(4)	TOTAL	% AGE
AGE OF PATIENT	< 20 YRS	13(11.11%)	2(3.6%)	8(33.33%)	1(25%)	24	12%
	21-25 YRS	60(51.28%)	32(60%)	11(45.83%)	2(50%)	105	52.5%
	26-30 YRS	33(28.2%)	17(30.91%)	5(20.8%)	1(25%)	56	28%
	31 -35YRS	8(6.83%)	3(5.45%)	NIL (%)	NIL (0%)	11	5.5%
	> 36 YRS	3(2.56%)	1(1.82%)	NIL (%)	NIL0 (%)	04	2%
	TOTAL	117(58.5%)	55(27.5%)	24(12%)	4(2%)	200	100%



B. Mode of Admission

Most of the patients admitted through emergency as depicted in the chart and table as compare to admission through OPD.

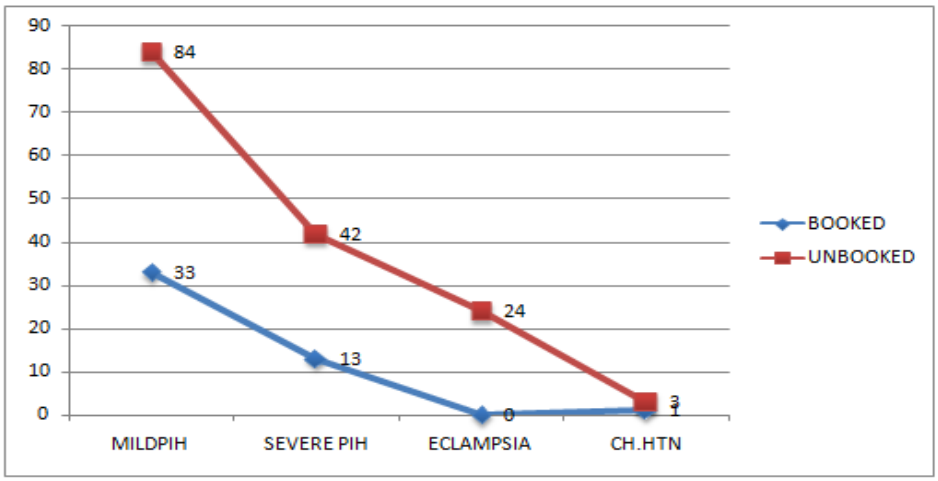
		MILD PIH(117)	SEVERE PIH(55)	ECLAMPSIA (24)	CH. HYPERTENSION(4)	TOTAL	% AGE
MODE OF ADMISSION	EMERGENCY	100(85.4%)	49(89.1%)	22(91.67%)	2(50%)	173	86.5%
	O.P.D	17(14.53%)	6(10.91%)	2(8.33%)	2(50%)	27	13.5%



C. BOOKED OR UNBOOKED

33(28.23%) of the women with mild PIH were booked cases and 84(71.8%) were unbooked. 13(23.64%) of the women with severe PIH were booked cases and 42(76.36%) were unbooked. All eclamptic patients that were admitted in our hospital were unbooked.

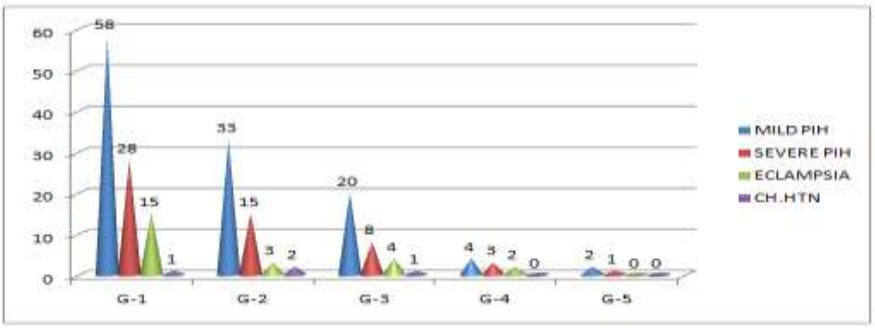
		MILD PIH (117)	SEVERE PIH (55)	ECLAMPSIA (24)	CH. HYPERTENSION(4)	TOTAL	% AGE
BOOKED OR UNBOOKED	BOOKED	33(28.23%)	13(23.64%)	NIL(0%)	1(25%)	47	23.5%
	UNBOOKED	84(71.8%)	42(76.36%)	24(100%)	3(75%)	153	76.5%



D. Gravidity

102(51.5%) of all pregnant women with PIH were primigravidae out of which 58(49.57%) had mild PIH, 28(50.91%) had severe PIH and 62.5% of eclamptic patients were primigravidae. The %age decreases as gravidity increases as depicted in table and chart.

		MILD PIH (117)	SEVERE PIH (55)	ECLAMPSIA (24)	CH. HTN (4)	TOTAL	% AGE
GRAVIDITY	GRAVIDA-1	58(49.57%)	28(50.91%)	15(62.5%)	1	102	51.5%
	GRAVIDA-2	33(28.2%)	15(27.27%)	3(12.5%)	2	53	26.5%
	GRAVIDA-3	20(17.09%)	8(14.55%)	4(16.6%)	1	33	16.5%
	GRAVIDA-4	4(3.42%)	3(5.45%)	2(8.33%)	NIL	9	4.5%
	GRAVIDA-5	2(1.71%)	11.82(%)	NIL	NIL	3	1.5%



E. GESTATION

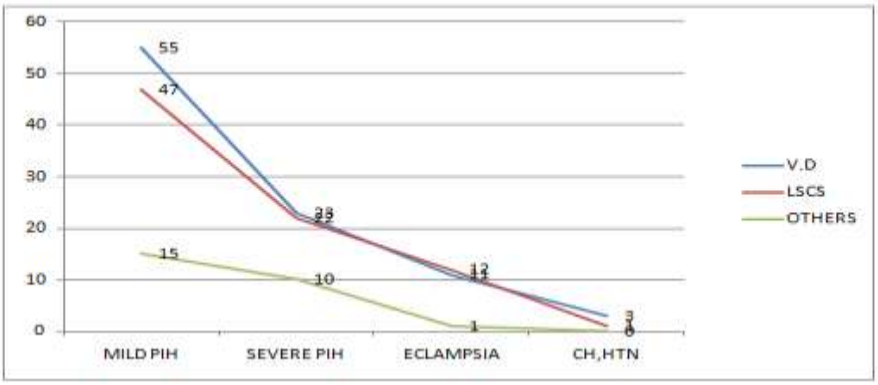
97% of the women with mild PIH had gestation time between 29-40 weeks. 89% of the women with severe PIH had gestation time between 29-40 weeks and 91% of the women with eclampsia had gestation time between 29-40 weeks.

		MILD PIH (117)	SEVERE PIH (55)	ECLAMPSIA (24)	CH. HYPERTENSION(4)	TOTAL	% AGE
GESTATION	< 28 WEEKS	3(2.56%)	6(10.91%)	2(8.33%)	NIL	11	5.5%
	29-37 WKS	56(47.86%)	29(52.73%)	9(37.5%)	3	97	48.5%
	38-40 WKS	58(49.5%)	20(36.36%)	13(54.16%)	1	92	46%

F. Mode Of Treatment

55 (47%) of the patients with mild PIH had normal vaginal delivery, 47 (40.17%) underwent caesarean section and 15(12.82%)cases of lesser gestational ages were either managed conservatively or left against medical advice. 23 (41.82%) of the patients with severe PIH had normal vaginal delivery, 22 (40%) underwent caesarean section and 10(18.18%)were either managed conservatively or not reported. 11 (45.83%) of the patients with eclampsia had normal vaginal delivery, 12(50%) undergone caesarean section and 1(4.16%) case was a referral case with LSCS done at a peripheral hospital and referred for management of postpartum eclampsia.

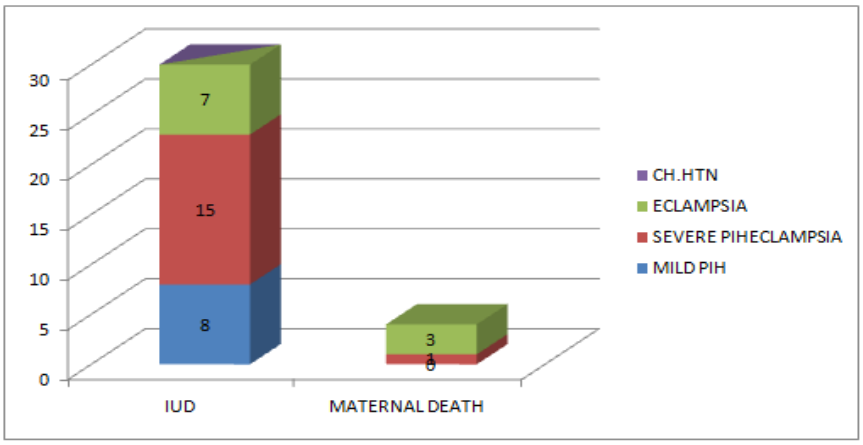
		MILD PIH (117)	SEVERE PIH (55)	ECLAMPSIA (24)	CH. HTN (4)	TOTAL	% AGE
MODE OF TREATMENT	V.D	55(47%)	23(41.82%)	11(%)	3	92	46%
	LSCS	47(40.17%)	22(40%)	12(%)	1	82	41%
	OTHERS	15(12.82%)	10(18.18%)	1(%)	NIL	26	13%



G. Maternal and foetal outcome

Out of 117 pregnant women with mild PIH, 8 (6.84%) of the patients had IUD and there was no maternal death, Out of 55 pregnant women with severe PIH, 15 (27.27%) of the patients had IUD and there was one (1.82%) maternal death, Out of 24 pregnant women with eclampsia, 7 (29.16%) of the patients had IUD and there was 3 (12.5%) maternal death.

		MILD PIH (117)	SEVERE PIH (55)	ECLAMPSIA (24)	CH. HYPERTENSION (4)	TOTAL	% AGE
FOETAL OUTCOME	IUD	8(6.84%)	15(27.27%)	7(29.16%)	NIL	30	15%
MATERNAL OUTCOME	MAT. DEATH	NIL (0 %)	1(1.82%)	3(12.5%)	NIL	4	2%



III. Discussion

Most of the patients were admitted through emergency as compared to admission through OPD. 80.5% of the patients with PIH fell in the age group of 21-30 yrs. 33(28.23%) of the women with mild PIH were booked cases and 84(71.8%) were unbooked. 13(23.64%) of the women with severe PIH were booked cases and 42(76.36%) were unbooked. All eclamptic patients that were admitted in our hospital were unbooked. 102(51.5%) of all pregnant women with PIH were primigravidae; out of which 58(49.57%) had mild PIH, 28(50.91%) had severe PIH and 62.5% of eclamptic patients were primigravidae. So it is evident that PIH is more prevelant in primigravidae. The %age decreases as gravidity increases. 97% of the women with mild PIH had gestation time between 29-40 weeks. 89% of the women with severe PIH had gestation time between 29-40 weeks and 91% of the women with eclampsia had gestation time between 29-40 weeks. 55 (47%) of the patients with mild PIH had normal vaginal delivery, 47 (40.17%) underwent caesarean section and 15(12.82%) cases of lesser gestational ages were either managed conservatively or left against medical advice. 23 (41.82%) of the patients with severe PIH had normal vaginal delivery, 22 (40%) underwent caesarean section and 10(18.18%)were either managed conservatively or not reported. 11 (45.83%) of the patients with eclampsia had normal vaginal delivery, 12(50%) underwent caesarean section and 1(4.16%) case was a referral case with LSCS done at a peripheral hospital and referred for management of postpartum eclampsia. The major indications for LSCS were foetal distress, previous caesarean section, malpresentation etc. Out of 117 pregnant women with mild PIH, 8 (6.84%) of the patients had IUD and there was no maternal death, Out of 55 pregnant women with severe PIH, 15 (27.27%) of the patients had IUD and there was one (1.82%) maternal death, Out of 24 pregnant women with eclampsia, 7 (29.16%) of the patients had IUD and there were 3 (12.5%) maternal death.(9,10,11)

IV. Summary And Conclusion

From the above study it is evident that PIH has a significant impact on the maternal and foetal outcome. The morbidity and mortality depends on severity of PIH, regular antenatal check up after proper registration done or not in antenatal clinic, proper follow up of pregnant women with PIH done or not and timely referral of such patients to higher centers.. There is no way known to prevent preeclampsia and eclampsia. However, the outcome can be improved with prompt recognition and management, so it is important for pregnant women to have routine health screenings. Most women with mild preeclampsia have good pregnancy outcomes. Eclampsia is a serious condition with about a 2% mortality (death) rate. So regular care would definitely save the mother from complications like eclampsia, abruptio- placentae, IUGR, IUD etc and salvage foetus and mother.

Bibliography

[1]. Singhal SR, Deepika, Anshu, Nanda S.Maternal and perinatal outcome in severe Preeclampsia and eclampsia. JSAFOG. 2009;1(3):25-8.

[2]. Walker JJ. Preeclampsia. Lancet.2000;356:1260-5.

[3]. SC Robson. Hypertension and renal disease in pregnancy. In: Dr. Keith Edmond, editors. Dewhurdt's textbook of Obstetrics and Gynaecology. 4th edition. Orient Longman ltd., London. 1986;4:203-9.

[4]. RaddiSA,Nayak BS, RatnaP,Stress, Coping Strategies, Quality of life and Livid Experiences of Women With Pregnancy induced Hypertension. JSAFOG. 2009Apr;1(1):65-8.

[5]. "40". Williams obstetrics (24thed.). McGraw-Hill Professional. 2014. ISBN 9780071798938.

[6]. Lambert, G; Brichant, JF; Hartstein, G; Bonhomme, V; Dewandre, PY (2014). "Preeclampsia: an update.". ActaanaesthesiologicaBelgica **65** (4): 137–49. PMID 2562239.

[7]. "Hypertension in pregnancy. Report of the American College of Obstetricians and Gynecologists' Task Force on Hypertension in Pregnancy." (PDF). Obstet Gynecol. **122** (5): 1122–31. November 2013.

[8]. WHO recommendations for prevention and treatment of pre-eclampsia and eclampsia. (PDF). 2011. ISBN978-92-4-154833-5.

[9]. Abalos, E; Cuesta, C; Grosso AL; Chou, D; Say, L (September 2013). "Global and regional estimates of preeclampsia and eclampsia: a systematic review.". European journal of obstetrics, gynecology, and reproductive biology **170** (1): 1–7.

[10]. Arulkumaran, N.; Lightstone, L. (December 2013). "Severe pre-eclampsia and hypertensive crises". Best Practice & Research Clinical Obstetrics & Gynaecology **27** (6): 877–884. doi:10.1016/j.bpobgyn.2013.07.003. PMID 23962474

[11]. GBD 2013 Mortality and Causes of Death, Collaborators (17 December 2014). "Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013." Lancet **385**:11771. Doi:10.1016/S01406736(14)616822. PMC 4340604. PMID 2553044