Scholars Journal of Applied Medical Sciences (SJAMS) **ISSN 2320-6691 (Online)**
Sch. J. App. Med. Sci., 2014; 2(4B):1286-1289 **ISSN 2347-954X (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com **DOI:** 10.36347/sjams.2014.v02i04.026

Research Article

A Comparative Study to Find the Maternal and Foetal Outcome among Pregnancy Induced Hypertension and Non–Pregnancy Induced Hypertnsion Gravid Women

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Abstract: Hypertension is the most common medical problem encounted in pregnancy and remains an important cause of maternal and foetal mortality and morbidity. The aim of the study were to compare the maternal outcome of pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women and compare the foetal outcome of pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women. A comparative study was used to find the maternal and foetal outcome among pregnancy induced hypertension and non-pregnancy induced hypertension gravid women in selected hospital of Sebha, Libya. Non-probability purposive sampling technique was used to obtain pregnancy induced hypertension and non- pregnancy induced hypertension gravid women. A sample of 100 pregnant induced hypertension and 100 non- pregnancy induced hypertension gravid women were selected. Data was collected using structured interview schedule. Findings of the study showed that 32% PIH gravid women had pre-term delivery ; 35% PIH gravid women had postpartum haemorrhage and 34% PIH gravid women had delayed episiotomy wound healing. Regarding the foetal outcome 36% babies had asphyxia neonatorum ; 40% babies had low birth weight ; 35% prematurity and 38% babies had intra-uterine growth retardation (IUGR). There was significant association in maternal and foetal outcome among PIH and Non-PIH gravid women.
Keywords: Pregnant Induced Hypertension (PIH), Non- pregnant induced hypertension, Gravid women, Intra Uterine Growth Retardation (IUGR), Pre-eclampsia, Eclampsia

INTRODUCTION

Pregnancy - induced hypertension(PIH) is a form of high blood pressure in pregnancy occuring in about 5% to 8% of all pregnancies. Pre-eclampsia and eclampsia are the hypertensive disorders of pregnancy. PIH is a major cause of maternal , perinatal morbidity and mortality worldwide [1, 2]. PIH has been confirmed to increase the risk of low birth weight and reduce foetal growth [3, 4]. Low birth weight or IUGR babies have been associated with the occurrence of several chronic diseases such as cardiovascular disease in later life [5, 6].

Pre-eclampsia has been defined as a disease of first pregnancies . The association between primi parity and pre-eclampsia is so widely accepted that is at the core of several pathophysiological theories [6]. One of the most severe effect of pre-eclampsia is vasospasm, the reduction of blood flow to the major organs of the body. This vasospasm also causes intra-arterial lesion. One possible stimulus for pre-eclampsia is damage to or activation of the endothelium, since endothelial cells are extensively damaged in pre-eclampsia. Eclampsia is associated with high case fatality rate and a major contributor to maternal deaths [7, 8].

Pre-eclampsia is unpredictable in its onset and the only cure is delivery of the baby. The most crucial step in identifying pre-eclampsia is the early detection of elevated blood pressure [8]. Maternal mortality in PIH is primarily due to low standard of care and delay in referral services. One of the most important function of antenatal care (ANC) is to detect high risk pregnancies and to give them the necessary care. Early detection of pre-eclampsia and eclampsia are important in reducing the maternal and neonatal morbidity and mortality.

Objectives

Objectives of this study were to

- Compare the maternal outcome of pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women
- Compare the foetal outcome of pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women .

MATERIALS AND METHODS

To achieve the objectives a descriptive research design was adopted. Non-probability purposive sampling technique was used to obtain pregnancy induced hypertension and non- pregnancy induced hypertension gravid women. A sample of 100 pregnant induced hypertension and 100 non-pregnancy induced hypertension gravid women were selected. The study was conducted at selected hospital of Sebha, Libya. Data was collected using structured interview schedule. It consisted of three parts, viz. Part –I that helped to collect the demographic data of pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women; Part – II that was aimed at assessing the maternal outcome of pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women. An assessment proforma and measurement inch tape were used to assess the preterm delivery and primary postpartum haemorrhage. Noronha (1999) developed episiotomy wound assessment scale was used to assess the episiotomy wound healing. Part – III that was aimed at assessing the foetal outcome of pregnancy induced hypertension in gravid women with non-pregnancy induced hypertension in gravid women. Apgar score was used to assess asphyxia neonatorum. A standardized weighting scale was used to check the birth weight of the baby. Dubowitz scale was used to determine prematurity and IUGR. Dubowitz graph was used to plot the final score. The prepared tool was validated by experts. The reliability of tool was found to be r = 0.98.

RESULTS

The study sample consisted of 100 pregnant induced hypertension and 100 non- pregnancy induced hypertension gravid women. Table 1 indicate that, maximum 44% of pregnancy induced hypertension gravid women belongs to the age group of 20 and below; whereas in non- pregnancy induced hypertension gravid women majority 59% were between 21 – 28 years. Regarding education 38% pregnancy induced hypertension gravid women studied up to secondary school whereas majority 46% non- pregnancy induced hypertension gravid women studied up to higher secondary school. In both the groups maximum 44% pregnancy induced hypertension gravid women and 50% non- pregnancy induced hypertension gravid women were employed respectively. In both the groups maximum 39% pregnancy induced hypertension gravid women and 39% non- pregnancy induced hypertension gravid women were had 201 – 400 LD as a monthly family income. Maximum 58% pregnancy induced hypertension gravid women were primigravida and majority 60% non- pregnancy induced hypertension gravid women were multi gravida.

Table 2 shows that, there was significant association in maternal outcome among pregnancy induced hypertension gravid women and non-pregnancy induced hypertension gravid women. Majority 32% PIH gravid women had preterm delivery whereas 15% Non-PIH gravid women had preterm delivery. Maximum 35% PIH gravid women and 18% Non-PIH gravid women had primary postpartum haemorrhage. In the both group 34% PIH gravid women and 14% Non-PIH gravid women had partial episiotomy wound healing. The incidence of preterm delivery χ^2 8.03 ($p > 0.05$) , primary postpartum haemorrhage χ^2 7.41 ($p > 0.05$) and episiotomy wound healing χ^2 10.96 ($p > 0.05$) respectively. It also implies that there is significant association in incidence of preterm delivery, primary postpartum haemorrhage and episiotomy wound healing between PIH and Non-PIH gravid women.

Table 3 shows that, there was significant association in foetal outcome among pregnancy induced hypertension gravid women and non-pregnancy induced hypertension gravid women. Majority 36% PIH gravid women's babies had asphyxia whereas 19% Non-PIH gravid women's babies had asphyxia. Maximum 40% PIH gravid women's babies had low birth weight and 18% Non-PIH gravid women's babies had low birth weight. In the both group 35% PIH gravid women's babies had prematurity and 16% Non-PIH gravid women's babies had prematurity. Majority 38% PIH gravid women's babies had IUGR and 16% Non-PIH gravid women's babies had IUGR. The incidence of asphyxia neonatorum χ^2 7.24 ($p > 0.05$) , low birth weight χ^2 7.57 ($p > 0.05$), prematurity χ^2 8.43 ($p > 0.05$) and IUGR χ^2 12.27 ($p > 0.05$) respectively. It also implies that there is significant association in incidence of asphyxia neonatorum, low birth weight, prematurity and IUGR between PIH and Non-PIH gravid women.

Table 1: Frequency and percentage distribution of sample characteristics of pregnancy induced hypertension and non- pregnancy induced hypertension gravid women

Variables	PIH gravid women (N=100) frequency & percentage	Non-PIH gravid women (N=100) frequency & percentage
Age (in years)		
20 and below	44	23
21 – 28	35	59
29 – 35	11	15
36 and above	10	3
Educational status		
Illiterate	2	-
Primary	35	3
Secondary	38	26
Higher secondary	22	46
Graduate	3	25
Occupation		
Employed	44	50
Unemployed	56	50
Monthly family income (dinar)		
200 and below	38	27
201 - 400	39	39
401 and above	23	34
Gravidity		
Primigravida	58	40
Multi gravida	42	60

Table 2: Frequency and percentage distribution and association of Maternal outcome among pregnancy induced hypertension and non- pregnancy induced hypertension gravid women

Variables Maternal outcome	PIH gravid women N=100	Non-PIH gravid women N=100	Chi-square	p–value
Preterm delivery				
Present	32	15	8.03	3.84
Absent	68	85		
Postpartum haemorrhage				
Present				
Absent	35	18	7.41	3.84
	65	82		
Episiotomy wound healing				
Partially healed	34	14	10.96	3.84
Healed	66	86		

Table 3: Frequency and percentage distribution and association of foetal outcome among pregnancy induced hypertension and non- pregnancy induced hypertension gravid women

Variables Foetal outcome	PIH gravid women N=100	Non-PIH gravid women N=100	Chi-square	p–value
Asphyxia				
Present	36	19	7.24	3.84
Absent	64	81		
Low birth weight				
Present	40	22	7.57	3.84
Absent	60	78		
Prematurity				
Present	35	16	9.56	3.84
Absent	65	84		
IUGR				
Present	38	16	12.27	3.84
Absent	62	84		

CONCLUSION

Out of 100 PIH gravid women and 100 Non-PIH gravid women, 32% PIH gravid women had preterm delivery and 15% Non-PIH gravid women had preterm delivery. 35% PIH gravid women had primary postpartum haemorrhage and 18% Non-PIH gravid women had primary postpartum haemorrhage . 34% PIH gravid women had partial episiotomy wound healing and 14% Non-PIH gravid women had partial episiotomy wound healing on fifth day. It also implies that there is significant association in incidence of preterm delivery, primary postpartum haemorrhage and episiotomy wound healing between PIH and Non-PIH gravid women. Among PIH and Non-PIH gravid women's babies ; 36% babies got asphyxia among PIH mothers and 19% babies got asphyxia among Non- PIH mothers, 40% babies got low birth weight among PIH mothers and 22% babies got low birth weight among Non- PIH mothers, 35% babies got prematurity among PIH mothers and 16% babies got low birth weight among Non- PIH mothers, 38% babies got IUGR among PIH mothers and 16% babies got IUGR among Non- PIH mothers. Having pre-eclampsia is one pregnancy is a poor predictor of subsequent pregnancy, but a strong predictor for recurrence of pre-eclampsia in future gestation. Early screening using simple tools and proper treatment of pre-eclampsia and eclampsia are important in reducing the maternal and neonatal morbidity and mortality.

REFERENCES

1. Roccella EJ; Report of the National high blood pressure educational program working group on high blood pressure in pregnancy. Am J Obstet Gynecol., 2000, 183(1): S1 – S22.
2. Zhang J, Zeisler J, Hatch MC, Berkowitz G; Epidemiology of pregnancy – induced hypertension. Epidemiol Rev., 1997; 19(2): 218 – 232.
3. Xiong X, Mayes D, Demianczuk N, Olson DM, Davidge ST, Newburn Cook C *et al*.; Impact of pregnancy – induced hypertension on foetal growth. Am J Obstet Gynecol., 1999; 180(1 Pt 1): 207-213.
4. Gibson AT, Carney S, Cavazzoni E, Wales JK; Neonatal and postnatal growth. Harm Res., 2000, 53(suppl 1): 42-49.
5. Luo ZC, An N, Xu HR, Larante A, Audibert F, Fraser WD; The effect and mechanism of primi parity on the risk of pre-eclampsia: a systemic review. Paediatr Perinat Epidemiol., 2007; 21(supp1): 36 -45.
6. Duckitt K, Harrington D; Risk factors for pre-eclampsia at antenatal booking systematic review of controlled studies. BMJ, 2005; 330(7491):565.
7. Hargood JL, Brown MA; Pregnancy induced hypertension: recurrence rate in second pregnancies. Med J Aust., 1991; 154(6): 376-377.
8. Podymow T, August P; Postpartum course of gestational hypertension and pre-eclampsia. Hypertens Pregnancy, 2010; 29(3):294-300.