

THE OCCURRENCE OF PREGNANCY INDUCED HYPERTENSION AMONG PERINATAL MOTHERS AND GAP ANALYSIS RELATED TO ANTENATAL CARE IN SELECTED HOSPITALS, WEST BENGAL, INDIA.



Nursing

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ABSTRACT

A descriptive study to assess the occurrence of pregnancy induced hypertension among perinatal mothers and gap analysis related to antenatal care in selected hospitals, West Bengal was undertaken to determine the occurrence of pregnancy induced hypertension among perinatal mothers, to identify the gap related to antenatal care and to find out the association between the occurrences of pregnancy induced hypertension and identified gap related to antenatal care. Convenience sampling technique was used to select 120 perinatal mothers. The study was conducted at B.S.M.C. & H, Bankura, West Bengal, India. Semistructured interview schedule and record reviewing formats were utilized to find out the variables. The major findings of study revealed that among 120 mothers, a few (15%) developed Pregnancy Induced Hypertension and gap related to antenatal care was identified in terms of standard protocol of World Health Organization (WHO). The study explored significant association between occurrence of PIH with checking of blood pressure and edema during antenatal period.

KEYWORDS

PIH, Perinatal mother, antenatal care, gap analysis.

INTRODUCTION

Hypertension, a sign of an underlying pathology which may be pre-existing or appears for the first time during pregnancy, is one of the common medical complications of pregnancy and contributes significantly to perinatal morbidity and mortality. Preeclampsia is a multisystem disorder of unknown etiology characterized by development of hypertension to the extent of 140/90 mmHg or more with proteinuria after the 20th week in a previously normotensive and non-proteinuric woman.^[1] Maternal mortality is an important index for monitoring the progress of safe motherhood programmes. But unfortunately maternal mortality rate of India is one of the highest in the world (308/100000). Pregnancy and child birth related complications are the major cause of death among women in their reproductive age group. Hypertensive disorders of pregnancy are the prime causes for early hospitalization, labour induction, maternal and fetal morbidity and mortality. Pregnancy Induced Hypertension (PIH) affects approximately one out of every 14 pregnant women. PIH occurs during first pregnancies usually, it can also occur in subsequent pregnancies. PIH is also more common in pregnant teens and in women over age 40. Many times, PIH develops during the second half of pregnancy, usually after the 20th week, but it can also develop at the time of delivery or right after delivery.

Among PIH mothers a few develop eclampsia (PIH with seizures), which is very serious for the mother and baby, or other serious problems. Fortunately, PIH is usually detected early in women who get regular antenatal care, and most problems can be prevented.^[2]

Antenatal care management is directed toward early detection, through assessment, and timely intervention. Gestational hypertension does not persist longer than 12 weeks postpartum and usually resolves during the first postpartum week (Harvey & Sibai, 2013).^[3]

The term perinatal is pertaining to the period immediately before and after birth. The perinatal period is defined in diverse ways. Depending on the definition, it starts at the 20th to 28th week of gestation and ends 1 to 4 weeks after birth.^[4] About 287000 women died in 2010 of complications during pregnancy or childbirth. Most of these deaths could be avoided as the necessary medical interventions exist and are well known. The key obstacle is pregnant women's lack of access to quality skilled care before, during and after childbirth.^[5]

The proportion of pregnant women receiving 4 or more antenatal care visits is used prominently as a global benchmark indicator to track maternal health program performances. First visit in around 16 weeks, second between 24 and 28 weeks, the 3rd visit at 32 weeks and the fourth visit at 36 weeks. Record blood pressure, edema and proteinuria at every antenatal visit. WHO protocol, at the partograph blood pressure should be plotted four hourly and urine analysis (proteinuria) should be performed every time the women passes urine. At the postnatal period

blood pressure should be checked immediately after birth, then 6 hours and then 24 to 48 hours. If blood pressure high in antenatal period then proteinuria would be checked in every 24 hours in postnatal period.^[6]

Objective of the study

The objectives of this study are to determine the occurrence of pregnancy induced hypertension among perinatal mothers, to identify the gap related to antenatal care and to find out association between the occurrences of pregnancy induced hypertension and identified gap related to antenatal care.

MATERIALS AND METHODS

This cross sectional study was carried out in outpatient and inpatient departments of Bankura Sammilani Medical College and Hospital, Bankura, West Bengal, India. The study was ethically approved by Institutional research and ethical committee of Bankura Sammilani Medical College and Hospital, Bankura, West Bengal, India. On the basis of inclusion and exclusion criteria, non-probability convenient sampling method was used to select study subjects. Data gathered through semi structured interview schedule and record reviewing formats. Data collected from subjects for at least four times during data collection period. At 1st time (28 weeks & above), at antenatal OPD, semi structured interview schedule was used for collection of demographic data & assessment of PIH and gap related to antenatal care. 2nd time (28 weeks & above) for assessment of PIH and gap related to antenatal care among perinatal women at antenatal OPD. 3rd time data was collected from labour room through record analysis for assessment of PIH during intra natal period. 4th time data was collected from postnatal ward through record analysis for assessment of PIH up to 48 hours at postnatal period.

RESULTS:

Section I Findings related to the demographic characteristics of perinatal mother. 90 (75%) perinatal mothers belonged to age group 18-24 years. It also depicts that 64 (51.66%) of the mothers were primi gravid. It also reveals that 70 (58.33%) of the mothers had secondary level of education. It also showed that 116 (96.66%) of mothers had to travel less than 5 kms to reach the hospital.

Section II: Finding related to the occurrence of PIH among perinatal mothers.

- A few (15%) mothers developed PIH. But majority (85%) of mothers participated in the present study had not developed PIH throughout the perinatal period.
- Majority (37.04%) mothers developed PIH at postnatal period, 29.64% mothers developed PIH at antenatal period and 33.33 % mothers developed PIH at intra natal period in 3rd visit also.
- Majority (39) of the mothers had systolic blood pressure and diastolic blood pressure below 140/90 mm of Hg and 72 mothers'

BP was not checked at 1st observation in intra natal period. Blood pressure of most of the mothers (106) of the mothers was not checked at 2nd observation in intra natal period. Total 9 mothers developed PIH at intranatal period, among them two mothers had BP $\geq$ 140/90 mmHg from their antenatal period. Not a single mother was checked for proteinuria in her intra natal period.

33 mothers had systolic blood pressure and diastolic blood pressure below 140/90 and 78 mothers were not checked for BP at 1st observation (immediate) in postnatal period, BP of most of the mothers were not checked in all three observations in intra natal period (109, 108, 114 respectively). Total (10) mothers developed PIH at postnatal period, among them seven mothers had BP $\geq$ 140/90 from their intranatal period.

- Not a single mother was checked for proteinuria in postnatal period.

Section III: Findings related to the gap analysis related to antenatal care. Gap was identified in terms of standard protocol of W.H.O.

- According to W.H.O protocol three visits are mandatory during 28 weeks to 36 weeks of antenatal period. Here, only 13.34% mothers had completed three visits but majority (86.66% mothers) had not completed three visits. So there was a huge gap identified in utilization of antenatal care among the mothers of the present study.
- Majority of mothers' blood pressures (52.50%) and edema (55.83%) were checked on a single occasion. According to W.H.O protocol BP and edema must be checked at each antenatal visit. Here, for none of the mothers BP & edema were checked on three occasions. So gap in antenatal services were present.
- Almost half (46.66%) of mothers were checked for proteinuria only once. According to W.H.O protocol proteinuria must be checked at each antenatal visit. So gap related to checking of proteinuria was identified at antenatal period.
- Record of medical illness and past obstetrical history was not available for any of the perinatal mothers.
- All (100%) mothers had prescribed tab calcium.
- According to W.H.O protocol every mother should be prescribed to have calcium tablet which was maintained.

Section IV Findings related to the association between the occurrence of PIH and identified gap related to antenatal care.

- Statistically significant association was found between occurrence of PIH and number of checking of blood pressure and edema at antenatal period.
- No statistically significant association was found between occurrence of PIH and number of visit and number of checking of proteinuria at antenatal period.

Analysis and Discussion

From this study a statistically significant association was found between occurrence of PIH and number of checking of blood pressure & edema at Antenatal period. If blood pressure & edema is checked in every visit, it will be help to early detection & diagnosis of PIH cases. It reduces the incidence of PIH & also decreases the maternal & foetal mortality and morbidity rate.

The study is supported by a community based longitudinal study conducted by Rouf Hussain Rather, S. Mohammad Salim Khan, Shahnaz Taing, July 2017, to measure the incidence of pregnancy-induced hypertension in block Hazratbal of district Srinagar, Jammu and Kashmir, for a period of 18 months. In that study the incidence of PIH was 20%. Majority of the women (14.5%) had Gestational Hypertension and about one fourth (5.5%) progressed to pre-eclampsia, while no one developed eclampsia. In the present study it was found that 11.11% mothers developed eclampsia^[7]

The study is also supported by a prospective analytical study conducted by Kolluru Vasavi, Harika Y. Ramya, and kaul Rajesh at Nalgonda, Tenlengana, in August 2016 to analyses the cases of gestational hypertension, pre-eclampsia and eclampsia and their maternal outcome in terms of mode of delivery and complications. The result showed that total hypertensive cases accounted for 234 (7.9%) of the total deliveries; out of which gestational hypertension were 63

cases, preeclampsia 146 and eclampsia 25 cases, accounting for (2.1%), (4.9%) and (0.9%) of all deliveries.^[8]

The study is supported by a cross-sectional study conducted by Amina Amrin for analysis of the Status of Antenatal Care in Bangladesh using BDHS 2011 data at Institute of Statistical Research and Training, Dhaka 1000, Bangladesh. The result showed that the status of antenatal care visit was not very satisfactory. Still, a large portion of pregnant mothers did not have access to WHO recommended minimum 4 antenatal care visits.^[9]

The study findings are supported by the above mentioned findings. In this present study Majority (72.50%) of mothers' number of visits were twice and a few (13.34%) mothers had visited the clinic thrice throughout antenatal period.

Recommendations

A similar study can be replicated on larger samples for better generalization of study findings. A comparative study can be conducted between rural and urban community or in different settings.

CONCLUSION

The occurrence of PIH among perinatal mothers was quite common. There was a gap present in antenatal care of the perinatal mothers. Early diagnosis and treatment through regular antenatal check-up was a key factor to prevent hypertensive disorders of pregnancy and its complications. Therefore, it is the need to devise a sound screening strategy to find out hypertension in pregnancy and comprehensive strategy for management of hypertension in pregnancy as well as maternal and child complications.

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