ANALYSIS OF HYPERTENSION AND ANEMIA AMONG WORKING PRIMIGRAVIDA WOMEN AS COMPARE TO NON-WORKING PRIMIGRAVIDA WOMEN AT THEIR ANTI-NATAL CHECKUP IN GYNAE OPD HAYATABAD MEDICAL COMPLEX PESHAWAR

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ABSTRACT

Introduction: Pregnancy is one of the most important periods in a woman's life and is accompanied with huge physiological changes, which can be similar to a tsunami for the body. Many different factors can influence the process of pregnancy and consequently the pregnancy outcome.

Aims and objectives: The basic aim of the study is to analyze that pregnancy induced hypertension and anemia are more common in Non-working Primigravida group women as compare to working Primigravida women.

Methodology of the study: This was a randomized study conducted in Gynae and medical OPDs of a tertiary care hospitals Hayatabad Medical Complex (HMC) and Khyber Teaching Hospital (KTH) Peshawar during May: 2018 to August 2018. We collected the data from 112 voluntarians female patients who visits the OPD of both the above hospitals for their anti-natal check up. We divided the data into two groups, each group of 56 women who were fulfilling our inclusion criteria. One group of working Primigravida women while a second group of equal number (56) with same parameters of our criteria, consisted of non-working Primigravida women. We collected all the basic characteristics and the required parameters of selected patients of both groups. We recorded their Blood Pressure and full blood counts for haemoglobin (Hb) in 3 consecutive anti-natal visits to OPDs.

Results: The data were collected from 112 patients with the mean age of working women are 27.4± 2.4 and non-working women are 25.5 ± 2.6. The mean gestational age is 24.4±3.5 and 25 ± 2.4 in working and non-working women respectively. The mean Hb levels were differ significantly in working and non-working women, as mean Hb level is 12.5±2.31 and 9.43±2.6 among working and non-working women respectively. Similarly the Blood Pressure recorded quiet different in women of both groups i.e mean systolic BP was recorded 131.4±7.5 and 146.6±6.3 in working and non-working women groups respectively. While mean diastolic blood pressure recorded as 85.4 ± 8.5 and 98.7± 7.4 in working and non-working women groups respectively. BMI of working women was noted as 25.4±2.6 and in non-working women as 26.5±3.4.

Conclusion: It is concluded that working women are protected to develop pregnancy induced hypertension or pre-eclampsia as compare to non-working pregnant women regarding BP and anaemia. It may be due to awareness of working women about their health and exertion. Results found very positive differences in the HB and BP among both groups.

Key Words: Hypertension, Anaemia, Pregnancy, Women

INTRODUCTION

Pregnancy is one of the most important periods in a woman's life and is accompanied with huge physiological changes, which can be similar to a tsunami for the body. Many different factors can influence the process of pregnancy and consequently the pregnancy outcome. Maternal age, parity, and socioeconomic factors are among these important factors[1]. Gestational hypertension is the most common cause of hypertension in pregnant women. Gestational hypertension is a clinical diagnosis defined by the new onset of hypertension (systolic blood pressure ≥140mmHg and/or diastolic blood pressure ≥90mmHg) at ≥20 weeks of gestation in the absence of proteinuria or new signs of end-organ dysfunction[2].

Primigravida (PG), defined as a woman who conceives for the first time, is in a high-risk group. PGs are at significantly higher risk for prolonged first and second stages of labor, increased chances of fetal distress during labor and need for intensive monitoring as compared to the multigravidas[3]. PGs are also at significantly increased risk for operative vaginal delivery and emergency cesarean section. The chances of primary postpartum hemorrhage in PGs are found to be more,

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and perinatal morbidity is also increased in the group[4].

Iron deficiency anemia is the most common nutritional deficiency would wide affection approximately 1.3 billion people. Anemia is identified as a very common nutritional problem in developing countries[5]. Prevalence of micro nutrient malnutrition in respect of iron, iodine and vitamin A is more wide spread than protein energy malnutrition. Pregnancy is a serious burden to the women with the disease for the anemia and places them at increased risk of mortality. Moderate to severe anemia during pregnancy increase the risk of low birth weight[6].

According to the WHO, anemia in pregnancy is present when the hemoglobin concentration in the peripheral blood is <11 gm%. Anemia in pregnancy is further divided into three grades, 10–10.9 gm% as mild anemia, 7–10 gm% as moderate anemia, and <7 gm% as severe anemia[7]. The prevalence of anemia in pregnancy as per National Family Health Survey-3 in India is as high as 58.7%. The present study was conducted with the objective of to assess the impact of anemia and hypertension on course and outcome of pregnancy in PGs[8].

AIMS AND OBJECTIVES

The basic aim of the study is to analyze that pregnancy induced hypertension and anemia are more common in non-working Primigravida group women as compare to working Primigravida women.

METHODOLOGY OF THE STUDY

This was a randomized study conducted in Gynae and medical OPD of a tertiary care hospitals Hayatabad Medical Complex and Khyber Teaching Hospital in Peshawar during May: 2018 to August; 2018. We collected the data from 112 female patients who visited the OPD of a hospital. We divided the data into two groups one of 56 women was those who were non-working Primigravida group and a second group an equal number of 56 women was working Primigravida group with same criteria. We collected all the basic characteristics of selected and required parameters patients of both groups. We recorded their BP and full blood counts for Hb in 3 consecutive anti-natal visits. Non probability convenient sampling method was used on the basis of inclusion and exclusion criteria.

Statistical analysis

The collected data were analyzed using SPSS software (version 17). The results are presented as a mean with 95% confidence interval limits or standard deviations. The significant value for P <.05 was accepted as statistically significant.

RESULTS

The data were collected from 112 patients with the mean age of working women are 27.4± 2.4 and non-working women are 25.5 ± 2.6. The mean gestational age is 24.4±3.5 and 25 ± 2.4 in working and non-working women respectively. The mean Hb level were differ significantly in working and non-working women, as mean Hb level is 12.5±2.31 and 9.43±2.6 among working and non-working women respectively. BMI of working women was noted as 25.4±2.6 and in non- working women as 26.5±3.4. Similarly we noted the systolic blood pressure in both groups for comparison. The systolic blood pressure was observed significantly different in both working and non-working groups which was 131.4 ± 7.5 and 146.6 ± 6 respectively, and diastolic blood pressure was 85.4 ± 8.5 and 98.7± 7.4 respectively.

Results shows that Hb level of working women becomes high as compared to non-working women and conversely the Blood pressure (systolic and diastolic both) becomes high in non-working women.

DISCUSSION

Pregnancy is the normal incident in the life of a women body, every pregnancy is a unique and a new experience for all women and adequately different from the previous[8]. The anatomical and physiological changes in pregnancy are associated with minor discomforts between women during pregnancy. Self-management regarding minor discomforts and practices during prenatal period is beneficial for pregnant women so practices of women about self-management are necessary for their health protection[9]. In our study we observed that the chances of anaemia and pregnancy induced hypertension is less in working woman as compare to house wives or non-working women. Keeping in view

Table. 1: Analysis of basic parameters of selected patients of both groups

Characteristics	Working Women	Non-working women	P Value
Maternal age (years)	27.4± 2.4	25.5 ± 2.6	.005
Gestational age in weeks	24.4±3.5	25 ± 2.4	.020
Systolic BP (mmHg)	131.4 ± 7.5	146.6 ± 6	.001
Diastolic BP (mmHg)	85.4 ± 8.5	98.7± 7.4	.001
Mean Hb (%, w/w)	12.5±2.31	9.43±2.6	.001
BMI (kg/m2)	25.4±2.6	26.5±3.4	.010

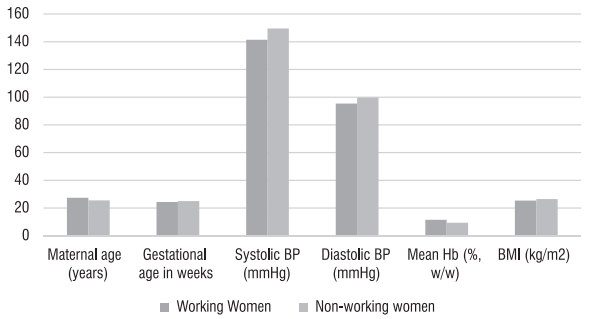

Figure 1: Comparison of non-working Primigravida group women with working Primigravida women on the basis of mean values

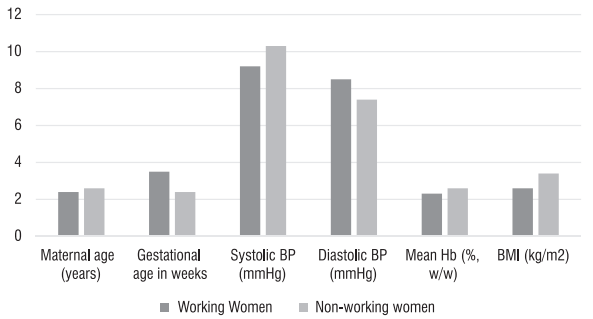

Figure 2: Comparison of non-working Primigravida group women with working Primigravida women on the basis of SD

the AGE and BMI plus other risk factors are the same. No close strong hypertensive history in the parents.

Pregnancy induced hypertension is thought to be one of the major causes of maternal death and sufferings all over the country. This study was conducted to know prevalence of pregnancy induced hypertension in third trimester in a teaching hospital[10]. The prevalence of the hypertensive disorders in pregnancy was 7.5% in this study but 21.6% and 17.2% that had been reported from south-eastern Nigeria and Finland, respectively. PGs are important regarding the subsequent obstetrical performance. All the enrolled women were in the age group 21–30 years, the only high-risk factors being a PG and mild to moderate anemia in almost half. There is evidence that mildly anemic pregnant women if well compensated with iron therapy may have an uneventful obstetric outcome. Iron deficiency anemia, a cause of considerable perinatal morbidity and mortality is most prevalent anemia affecting pregnant women, hence iron treatment was given to all women without diagnosing the cause of anemia[11]. In pregnancy, there is a state of physiological hemodilution following rise in plasma volume, with apparent fall in hemoglobin concentration in spite of the increase in hemoglobin mass[12].

These study findings were supported by Delma et al., in India, they found that, majority of the antenatal mothers belonged to the age group of 21-25 years, house wives, belongs to nuclear family. Similar results held by Aziz K.F. and Maqsood S.S. who conducts their study in Erbil city who found that, the majority of the study sample was between 18-25 years old, secondary school graduates, housewives and nuclear families[13].

CONCLUSION

It is concluded that working women are protected to develop pregnancy induced hypertension or pre-eclampsia and as compare to non-working pregnant women regarding BP and anaemia. It may be due to awareness of the working women about their health and secondly they used to do daily exertion. Results found very positive differences in the Hb and BP among both groups.

Mild to moderate anemic and hypertensive pregnant women can have a similar outcome as a normal pregnancy, if they do their anti-natal visits regularly and are detected in their early pregnancy. So appropriate care will be given.

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