Original Article

Dyslipidemia

To Determine the Frequency of Dyslipidemia in Primiparous Women, with Hypertension

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ABSTRACT

Objective: Objective of this study to determine the abnormalities of lipid profile in primiparous women with hypertension.

Study Design: Observational study.

Place and Duration of Study: This study was conducted at Gynae Department of MMC and of PUMHS Nawabshah from March 2012 to February 2014.

Materials and Methods: Total 100 primiparous women were chosen in this study after the diagnosis of the gestational hypertension. Cases from second trimester of gestational age were incorporated. Women with systolic blood pressure >130 mmHg, and d blood pressure >90 mm of Hg were considered as hypertensive. Every one of the women with known of fetal abnormalities, DM, abnormalities of the thyroid, ischemic coronary illness, renal failure, liver disease and previous history of lipid profile variations and hypertension before the pregnancy were rejected from the study. Blood tests of all the chose women's were taken in fasting and refer to hospital diagnostic laboratory for lipid profile. After the taking the reports information with respect to lipid profile and hypertension were recorded on the proforma.

Results: Total 100 ladies were incorporated, mean age was (mean+SD=28.5±4.2) years, gestational age was discovered (mean+SD=30.2 ± 3.1 weeks). Greater part of the women was found with overweight 68%. Dyslipidemia was found in 59% of the women, while 41% women were noted with ordinary lipid profile. As per the abnormalities of lipid profile, all total cholesterol found up in the 59% of the women, taking after by brought LDL was up in 42.0%, HDL was up in 20%, and TG was noted up in the 53.0% of the women. While in the 45% ladies HDL was noted decreased and 35% women were noted with normal HDL.

Conclusion: Variations in the lipid profile are the major reason for hypertension in primiparous women. Therefore it is very important that serum lipid profiles should be constantly observed all through the entire pregnancy period from ahead of diagnosis of hypertension to reduce the maternal morbidity and mortality in young women.

Key Words: Primiparous women, lipid profile abnormalities

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INTRODUCTION

Hypertensive issue stand for a most well-known therapeutic complication of pregnancy, influencing 6 to 8 percent of developments in the United States.[1] Pregnancy induced hypertension, characterized as high bold pressure following 20 weeks of pregnancy in the women with proteinuria and the edema without past history of high blood pressure is the significant reason for feto-maternal mortality and the morbidity. High blood pressure is available in 5% of whole pregnancies, in 10% of primiparous ladies and 20 –25% of ladies with past history of the chronic hypertension.[2] With expanding age, the risk of creating pregnancy induced hypertension raises.[3] Women with pregnancy induced hypertension will probably create overweight, dyslipidemia.[4] Hypertension during Pregnancy is one of the significant danger variables in now a days in services of the health, in light of the fact that it not only reason of mother mortality as well as decrease fetal growth for the duration of pregnancy.[5,6] High blood pressure is specifically connected with expanded stages of aggregate cholesterol (TC), triglycerides (TGs), low density lipoproteins (LDL) and low density lipoproteins (LDL) though; in the meantime, the stages of HDL are diminished. LDL-C stages top at mid 3rd trimester, most likely as a result of the hepatic impact of estradiol and the progesterone.[7] It has been recommended that the increment in plasma triglycerides and LDL-C stages for the duration of pregnancy may be utilized to distinguish women who will create atherogenic variations afterward in life.[8] Earlier research have demonstrated a decrease in cholesterol HDL up to ten years subsequent to the 1st pregnancy, free of weight, focal adiposity and chosen behavioral modifications.[9] Pregnancy induced hypertension be a factor of 15.6%

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maternal mortality.[10] Raised serum lipid fixations levels connected with seriousness of pregnancy induced hypertension.[9] Therefore the purpose behind this study to determine the dyslipidemia in primiparous women with gestational hypertension.

MATERIALS AND METHODS

This study was observational and was carried at Gynae Department of MMC and of PUMHS Nawabshah from March 2012 to February 2014. Total 100 primiparous ladies were chosen in this study after the diagnosis of the gestational hypertension. Women from second trimester of gestational age were incorporated. Women with systolic blood pressure >130 mmHg, and diastrolic blood pressure>90 mm of Hg were considered as hypertensive. Every women which known history of fetal abnormalities, DM, abnormalities of the thyroid, ischemic coronary illness, renal failure, liver disease and previous history of lipid profile variations and hypertension before the pregnancy were rejected from the study. Blood tests of all the chose women's were taken in fasting and refer to hospital diagnostic laboratory for lipid profile. After the taking the reports information with respect to lipid profile and hypertension were recorded on the proforma. All the data was analyzed on spss program version 17.0.

RESULTS

Total 100 women were included, mean age was (mean±SD=28.5±4.2) years, gestational age was (mean±SD=30.2 ± 3.1 weeks). Majority of women 61.0% were from rural areas. Table:1.

Majority of the women were found with overweight 68%, while 32% women were found with normal weight. Table:1.

Dyslipidemia was found in 59% of the women, while 41% women were noted with normal lipid profile. Figure 1.

Table No.1: Basic information of the patients n=100

Characteristics	Frequency/%
Mean age (mean±SD)	28.5±4.2 years
Gestational age (mean±SD)	30.2 ± 3.1 weeks
Blood pressure	
Systolic (mean+SD)	145.39 ± 7.68 mmhg
Diastolic (mean+SD)	97.80 ± 7.68 mmhg
BMI	
Over weight	68/68.0%
Under weight	32/32.0%
Residence	
Rural	61/61.0%
Urban	39/39.0%

According to the abnormal lipid profile, total cholesterol raised found in the 49% of the women, following by raised LDL was in 42.0%, raise HDL was in 20%, and raised TG was noted in the 53.0% of the women. While in the 45% women HDL was found decreased, and 35% women were noted with normal HDL Table:2.

Table No.2: Lipid profile of the patients n=100

Lipid Profile	Normal Frequency/%	Raised Frequency/%
TC	40/51.0%	60/60.0%
LDL	52/52.0%	42/42.0%
HDL	35/35.0%	20/20.0%
TG	53/53.0%	47/53.0%

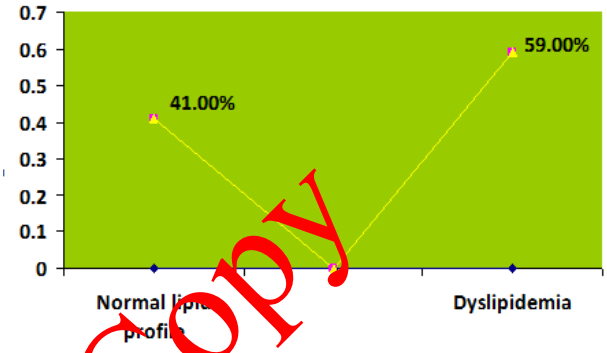

Figure No.1: Frequency of dyslipidemia n=100

DISCUSSION

The abnormalities of lipids in plasma increase obviously along with pregnancy. Lipid stages are influenced due to changes in the maternal hormonal. Other components, for example, BMI, nourishment, pre-pregnancy concentration of the lipid and different pregnancy complications may perform important role in the metabolism of lipids and concentration in plasma. In this study women age was (mean±SD=28.5±4.2) years. Similarly Mankuta D et al[11] reported the mean age 30.4 years. Gestational age of the women was found (mean±SD=28.2 ± 3.1 weeks). Majority of the cases 61.0% were blongs rural areas. Sreekarthik KP et al[12] reported mean gestational age 39.16 ± 1.01 weeks. These findings are very as compare to gestational age of our study, this may because of majority of the cases in this study were observed during antenatal care time.

In the study of Akhavan et al[13] stated that association between hyperlipidemia and the gestational hypertension severity assessed and those cases having severe preeclampsia were found with significant difference of raised plasma TG, total ch, and raised LDL–C levels. In some studies mentioned that in starting of pregnancy serum lipid profile variations developed and create the risk of the PIH.[14,15] In several early published studies stated that raised abnormalities of the lipid profile had found in pregnant women with hypertension.[16-18] As well as in our series **d**yslipidemia was found in majority of the cases 59% of the women, while 41% women were noted with normal lipid

profile. Obesity or increased the pregnancy BMI is a authenticate, risk factor of the enhancement of endothelial dysfunction and preeclampsia, but this mechanism of this raised risk not finally understood.[20] Majority of the women was found with overweight 68%, while 32% women were found with normal weight.

Likewise patients with hyperlipidemia, particularly hypertriglyceridemia have a higher occurrence of and are inclined to grow more extreme instances of preeclampsia.[21] Most, in spite of the fact that not all studies have demonstrated a dyslipidemic example of expanded TG, cholesterol, LDL and diminished HDL levels in preeclampsia.[22] In our study according to the abnormal lipid profile, total cholesterol raised found in the 49% of the women, following by raised LDL was in 42.0%, raise HDL was in 20%,and raised TG was noted in the 53.0% women. While in the 45% women HDL was found decreased, and 35% women were noted with normal HDL As well **as** Anjum R et al[22] demonstrated that serum concentrations of TC, TGs, LDL and VLDL highly raised whereas, the HDL found was considerably reduced in pregnant women with hypertension.

CONCLUSION

Variations in the lipid profile are the major reason for hypertension in primiparous women. Therefore it is very important that serum lipid profiles should be constantly observed all through the entire pregnancy period from ahead of diagnosis of hypertension to reduce the maternal morbidity and mortality in young women. More research with big sample size is needed in primigravida women.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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