**OP 1**

# Association of blood pressure with fasting blood glucose levels and lipid profile in a group of hypertensive and normotensive subjects

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**Background:** Hypertension increases the risk of diabetes mellitus (DM) and dyslipidemia. Existence of hypertension, DM, and dyslipidemia are considered a risk factor for the development of cardiovascular diseases and account for the majority of deaths.
**Objective:** Aim of this study was to investigate the association of blood pressure with fasting blood glucose and lipid profile in selected hypertensive and normotensive subjects.
**Methods & Materials:** Unmatched case control study was conducted with 80 subjects [control: normotensive healthy individuals (n=41); case: known primary hypertensive patients (n=39)]. Random sampling was done. Study setting was Faculty of Allied Health Sciences, USJ and a private laboratory. Blood pressure (BP) was measured using a standard mercury spygmomanometer and was recorded separately as SBP and DBP. Venous blood (5 mL) were collected from each subject for the analysis of total cholesterol (TC), triglycerides (TG), high density lipoprotein (HDL), and fasting blood glucose (FBG). $P<0.05$ was considered significant.
**Results:** The median SBP and DBP values were significantly different ($p<0.001$) among hypertensives and normotensives. There was a positive weak correlation ($r=0.364$, $p=0.023$) between DBP and FBG in hypertensives. There was no significant correlation between SBP and FBG either in hypertensives ($p=0.531$) or in normotensives ($p=0.999$). Hypertensives had higher median FBG level than normotensives. The median TC (control-197.4 mg/dl, case-182 mg/dl, $p=0.042$) and HDL (control-50 mg/dl, case-46 mg/dl, $p=0.004$) values were significantly different among hypertensives and normotensives. The median TG (control-122 mg/dl, case- 110 mg/dl, $p=0.725$) and LDL (control-125 mg/dl, case-114.4 mg/dl, $p=0.113$) values were not significantly different among hypertensives and normotensives. However, there was no significant correlation between SBP as well as DBP with TC, TG, HDL, LDL either in hypertensives or in normotensives.
**Conclusion:** The FBG level of hypertensives increases gradually as DBP level increases. There were no significant correlations between SBP level and FBG in both hypertensives and normotensives. There were no significant correlations between SBP and/or DBP levels and lipid profile categories (TC, TG, HDL, LDL) in hypertensives as well as in normotensives.