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## Relation of lipid profile with ischemic stroke

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**Objective:** To evaluate correlation of blood Total Cholesterol (TC), High-Density Lipoprotein (HDL), triglycerides and the TC:HDL ratio as risk factors for ischemic stroke.

Methodology: After ethical approval from hospital ethical board this case control study was conducted in the Department of Neurosurgery and Neurology, Lahore General Hospital Lahore, Punjab Institute of Neurosciences, Postgraduate Medical Institute, Ameerudin Medical College Lahore. Duration of study was two years from October 2015 to October 2017. A total of 600 patients were included in the study after obtaining written consent from patients. After completion of data collection, data was entered in computer software SPSS version 23 and analyzed for continuous and categorical variables. Continuous/numerical variables were presented as mean and SD and categorical variables were presented in form of numbers and percentages. Independent t-test and chi-square test were applied to see significance of data. P value less than or equal to 0.05 was considered as significant.

Results: Overall, 600 patients were included in this study. The study comprised of two equal groups, 50% (n=300) in each, i.e. cases and controls. The controls had mean TC, HDL and triglycerides 220.76±4.29 mg/dL, 54.02±4.45 mg/dL and 153.99±2.68 mg/dL respectively. The TC:HDL ratio was 5.48±1.41 and 4.09±1.22 for cases and controls respectively. The mean differences between TC, HDL, triglycerides and TC:HCL ratios were statistically significant among both groups.

**Conclusion:** Results of our study revealed that significant difference was observed between cases and controls regarding the levels of total cholesterol, HDL, triglycerides and TC:HDL ratio. Cases of ischemic stroke were found with high levels of TC, triglycerides and TC:HDL ratio and low HDL, this difference was found statistically significant with P value 0.001. So it was concluded that hyperlipidemia has significant relation with ischemic stroke.

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