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**Role of MTHFR 677 C>T Polymorphism on Blood
Homocysteine and Susceptibility to Hypertension**

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ABSTRACT Genetic polymorphism of Methylene tetrahydrofolate reductase is found to be associated with Stroke and other Cardiovascular diseases. This study analyzed Methylene tetrahydrofolate 677C>T polymorphism for association of blood homocysteine concentration and susceptibility to Hypertension in the Central Indian Population. This investigation has been conducted on 100 hypertensive cases and 223 healthy controls. 5ml blood sample has been taken from case and control and analyzed for blood homocysteine concentration by enzymatic assay and genotyping. The present study found statistically significant ($P < 0.0001$) to establish hyperhomocystenimia is a risk factor for hypertension. The Methylene tetrahydrofolate 677C>T polymorphism is significantly ($P < 0.0001$) associated with blood homocysteine level. The CT and TT genotype are showing association with hypertension susceptibility.