

Metalloproteinase-9 gene variants and risk for hypertension among ethnic Javanese

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Abstract	<p>a:4:{i:0;s:369:"BACKGROUND Hypertension is associated with endothelial-dependent vasodilation disorders, due to reduced nitric oxide (NO) availability and excessive angiotensin II (ANGII) activation. The objective of this study was to determine the association between matrix metalloproteinase 9 (MMP-9) gene polymorphism and hypertension in ethnic Javanese in the 40-80 year age group.";i:1;s:799:"METHODS This was a case-control study on 50 PROLANIS patients of family doctors meeting the inclusion criteria and 50 controls without hypertension. Subjects were hypertensive patients with constant systolic arterial pressure of > 140 mmHg and diastolic arterial pressure of > 90 mmHg, confirmed in three successive measurements The observed parameters were degree of MMP-9 polymorphism, and NO and ANG-II levels. Matrix metalloproteinase 9 polymorphism was determined by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) using the SmaI restriction enzyme. MMP-9 polymorphisms were indicated by variation in band patterns. Degree of polymorphism in cases and controls were compared with NO and ANG-II levels in both groups. Data analysis was done using independent t-test.";i:2;s:436:"RESULTS The heterozygous (3 band) to normal (2 band) MMP-9 genotype ratio was 3: 1 in hypertensives, but balanced in controls. In hypertensives, heterozygous GA and homozygous AA genotype frequencies were respectively 3.198 and 1.548 times higher than that of the GG genotype (p=0.008 and p=0.726). There was a statistically significant differences of NO and Ang-II levels between cases and controls (p=0.000 and p=0.000; respectively).";i:3;s:137:"CONCLUSION Matrix metalloproteinase 9 gene polymorphisms in hypertensive ethnic Javanese are associated with NO and angiotensin II levels.";}</p>
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