

## Documents

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**Plasma Haptoglobin as A Potential Biomarker for Coronary Artery Disease in Young Hypertensive Adults**  
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**Abstract**

**INTRODUCTION:** Uncontrolled hypertension is one of the recognized risk factors for coronary artery disease (CAD) in young adults, commonly underestimated owing to the young age. A novel biomarker to improve CAD risk assessment and hypertension management should be identified for this cohort. Thus, we had conducted a study to investigate plasma concentration and the role of haptoglobin in young hypertensive adults in the establishment of premature acute myocardial infarction (AMI). **MATERIALS AND METHODS:** A total of 120 male adults aged between 18 to 45 years enrolled into this cross-sectional study, divided into control, hypertensive, and acute myocardial infarction (AMI) groups. Blood samples were collected from all subjects, plasma concentrations of haptoglobin measured using enzyme-linked immunosorbent assays, and other CAD risk factors including high sensitivity C-reactive protein (hs-CRP) levels were analyzed. **RESULTS:** Plasma concentration of haptoglobin in the AMI group was the highest compared to hypertensive and control group (290.63±99.90 vs. 208.47±112.93 vs. 170.02±108.11 ng/ml, p<0.006). There was a significant association between AMI and plasma haptoglobin concentration in hypertensive subjects independent of other known CAD risk factors (OR: 0.985, 95% CI 0.973-0.997, p=0.017). There was positive correlation between plasma haptoglobin and hs-CRP (r=0.0370, p<0.001). **CONCLUSION:** Plasma haptoglobin is a potential biomarker to identify young hypertensive adults who are at risk of developing CAD. © (2023), (International Islamic University Malaysia). All Rights Reserved.

**Author Keywords**

Biomarker; Coronary Artery Disease; Haptoglobin; Hypertension; Young Adults

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