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### Association Between Caffeine with Cyp450 1a2 And Il-6 Levels in Acehnese Who Suffer from Coronary Heart Disease

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**Abstract :** Coffee, a main source of caffeine, has controversial effects on cardiovascular health. We evaluated the association of caffeine levels with the levels of Cytochrome P450 Subfamily 1A2 (CYP1A2) and interleukine-6 (IL-6) in Acehnese coffee drinker with coronary heart disease (CHD) compared to who do not consumed coffee (non-coffee drinkers). Forty eight Acehnese male with CHD consisted of 24 coffee drinkers and 24 non-coffee drinkers participated in this case-control study which was conducted in Cardiology Division of Internal Medicine and Heart Catheterization Laboratorium of dr. Zainoel Abidin General Hospital, Banda Aceh. Afternoon blood samples were collected to determine the levels of caffeine, CYP1A2 and IL-6. Data obtained were analyzed for the differences and its correlations. Plasma levels of caffeine and IL-6 in coffee drinkers were significantly higher compared to that in non-coffee drinkers. Although CYP1A2 levels in coffee drinkers appeared to be higher compared to that non-coffee drinkers, but it was not statistically significant ( $p=0,06$ ). There was a significant correlation between the levels of caffeine with the levels of IL-6 ( $r=0.36$ ;  $p=0.01$ ), but there was no significant correlation between the levels of caffeine with the levels of CYP1A2 ( $r=0.23$ ;  $p=0.12$ ). The present study demonstrated that the levels of caffeine and IL-6 differ based on coffee consumer habit, not for CYP1A2 levels. It is only a significant association between the levels of caffeine with the levels of IL-6.

**Keywords :** plasma caffeine level; CYP1A2 level; IL-6 level; coronary heart disease.

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