

中文題目：芳香烴受體血漿濃度與心外膜脂肪組織間的關聯性

英文題目：The relationship between plasma concentrations of aryl hydrocarbon receptor and epicardial adipose tissue

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Background: Epicardial adipose tissue exists between the myocardium and the visceral pericardium. It has been reported that thickness of epicardial adipose tissue is associated with coronary artery disease, insulin resistance, metabolic syndrome and cardiac changes. Aryl hydrocarbon receptor (AhR) is a ligand-activated transcription factor. It is involved in many physiological processes, including energy metabolism. Circulating AhR ligand is associated with weight gain and glucose intolerance. In this study, we aimed to examine the relationship of plasma AhR level both with obesity and with epicardial adipose tissue thickness.

Methods: This cross-sectional study recruited 30 male adults with a body mass index (BMI) ≥ 27 kg/m² (obese) and 23 age-matched men with a BMI < 24 kg/m² (healthy control). Waist circumference, blood pressure, plasma glucose, plasma insulin, blood lipids and plasma AhR were measured. Epicardial adipose tissue was assessed using magnetic resonance imaging.

Results: In the obese group, the plasma AhR level was significant higher than control group (81.0 ± 24.5 vs. 65.1 ± 16.4 , $P = 0.010$). The plasma AhR level was significantly correlated with epicardial adipose tissue thickness ($r = 0.380$, $P = 0.005$).

Conclusion: Plasma AhR level was positively correlated with epicardial adipose tissue thickness in men.