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<u>1034-106</u>　　　**Risk Factors for the Development of Coronary Artery Disease After Cardiac Transplantation. An Intravascular Ultrasound Study**

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Background: The role of specific risk factors in the development of cardiac allograft vasculopathy (CAV) of heart transplant patients remains unclear. This study evaluated the association between risk factors and identification of CAV using intravascular ultrasound imaging.

Methods: Intravascular ultrasound examinations at baseline and 1 year after transplantation were performed in 167 patients. The greatest change in maximal intimal thickness (MIT) from baseline to 1 year was obtained for each matched site. The development of CAV was defined as an increase in MIT $\geq$0.5mm. The incidence of 26 risk factors potentially affecting the development of CAV was analyzed.

Results: There were significant differences in trigriceride level, use of azathioprine (AZA), use of statins at follow-up, donor age, and grade 3A rejections in patients who developed CAV (n=28) versus those who did not (n=139). Using multivariate analysis, hypertriglyceridemia, older donor age, use of AZA and not using statins were independent predictors for the development of vasculopathy (p<0.05). Classification and regression tree (CART) analysis identified the levels of variables that predict the highest likelihood of developing CAV: 1) TG>500mg/dl, 2) Donor age>36years, 3) ischemic time>5hrs, and 4) BMI>41.6.

Conclusions: The use of statins is effective for preventing vasculopathy. A high triglyceride level, perhaps as a manifestation of the metabolic syndrome, during the first year post transplant is associated with early vasculopathy. Older donors, longer ischemic time, use of AZA, and higher BMI also predispose patients to develop vasculopathy.

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