



## **Characteristics in the Taiwanese population with vasospastic angina: from bedside to bench**

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Vasospastic angina is a not uncommon cause of ischemic heart disease, including acute coronary syndromes. The precise mechanisms responsible for the occurrence of vasospastic angina are not known, however. During the past 10 years, we noted that vasospastic angina is not uncommon in Taiwanese as in Japanese and the characteristics are also similar. The cigarette smoking is also a major clinical risk factor for coronary spasm in Taiwan. Most interestingly, the vasospastic angina is the major cause of exercise-induced ST-segment elevation in Taiwanese patients without prior myocardial infarction. Vasospastic angina also has been reported to be a frequent complication in cases involving connective tissue disease, and the inflammatory condition is associated with Vasospastic angina in these patients. We and others had noted that the serum level of the inflammatory markers are elevated in Vasospastic angina patients without hemodynamically significant stenosis and the use of antispastic agents decreased high-sensitivity C-reactive protein levels in these patients. These findings suggest it is reasonable to speculate that inflammation exists in angiographically normal coronary arteries with coronary spasm. Recently, we found that interleukin-6 inhibits eNOS activation through its binding to stabilized caveolin-1 protein in cultured human umbilical vein endothelial cells. Furthermore, we found that the protein ratio of Rho-kinase 1/2 of blood leukocyte was significantly associated with the diagnosis of vasospastic angina and the ratio was decreased after antispastic therapy for 3 months. In conclusion, inflammation exists in patients with vasospastic angina and the mechanisms need further investigation.