

## The Clinical Feature of Coronary Heart Disease in Women

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Coronary spasm plays an important role in the pathogenesis of coronary heart disease in general. The incidence of ischemic heart disease is relatively uncommon in premenopausal women. The abundance of endogenous ovarian hormones is commonly assumed to be a major contributor to this phenomenon. As endothelial dysfunction is reported to be one of the reasons for coronary spasm, estrogen may further be effective for suppression of coronary spasm itself. To examine whether the variation of ovarian hormones affects the frequency of myocardial ischemia in premenopausal women with variant angina, we enrolled 10 patients (33-51 years) in the study. All anti-anginal drugs, except sublingual nitroglycerin, were withdrawn during the study. The number of ischemic episodes peaked from the end of the luteal phase to the beginning of the menstrual phase and bottomed in the follicular phase in every patient. Both flow-mediated vasodilation (FMD) and estradiol levels were lowest from the end of the luteal phase to the beginning of the menstrual phase and were highest in the follicular phase. Progesterone levels increased only in the luteal phase. Estradiol and FMD had a significant effect on ischemic episodes, but progesterone did not. In premenopausal women with variant angina, a significant cyclic variation is recognized in the frequency of myocardial ischemia and the endothelial function during the menstrual cycle, which is associated with the variation of ovarian hormones, especially estrogen.