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Impaired myocardial accumulation of 15-(p-iodophenyl)-9-(R,S)-methyl-pentadecanoic acid in a patient with hypertrophic cardiomyopathy and exercise-induced ischemia due to vasospasm

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We encountered a patient with hypertrophic cardiomyopathy complicated with exercise-induced myocardial ischemia. Exercise-stress ^{99m}Tc-tetrofosmin imaging demonstrated reversible ischemia in the lateral wall, whereas resting fatty acid imaging with a new beta-methyl branched fatty acid analogue, I-123-15-(p-iodophenyl)-9-(R,S)-methylpentadecanoic acid (^{123}I-9-MPA), showed impaired uptake and accelerated washout kinetics in the inferoapical and posteroseptal walls but not in the ischemia-related region. These findings suggest that the metabolic derangement is closely related to cardiomyopathy per se rather than exercise-induced myocardial ischemia in this patient with hypertrophic cardiomyopathy and a spastic coronary lesion so that myocardial perfusion and ^{123}I-9-MPA imagings may contribute to clarifying the etiological background of impaired myocardial fatty acid metabolism.

Key words: hypertrophic cardiomyopathy, exercise-stress, fatty acid imaging, coronary vasospasm