ORIGINAL ARTICLE

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A long-acting calcium antagonist over one year did not improve BMIPP myocardial scintigraphic imagings in patients with pure coronary spastic angina

Shozo SUEDA,* Akira OSHITA,* Yousuke IZOE,* Hiroaki KOHNO,* Hiroshi FUKUDA,* Takaaki OCHI** and Tadao URAOKA***

**Department of Cardiology, Saiseikai Saijo Hospital*
***Department of Cardiology, Takanoko Hospital*
****Department of Cardiology, Kita Medical Association Hospital*

Background: Calcium antagonists (Ca) have been effective in reducing angina attacks in patients with variant angina. However, there are no reports regarding the effectiveness of Ca on myocardial fatty acid metabolic images in patients with pure coronary spastic angina (CSA). ***Objectives:*** This study sought to examine the correlation between myocardial fatty acid metabolic images and the medical treatment of Ca in patients with pure CSA. ***Methods and Results:*** This study included 35 consecutive patients (28 men, mean age of 66 ± 10 years) with angiographically confirmed coronary spasm and no fixed stenosis. Long-acting Ca was administered to all 35 patients. Isosorbide dinitrate / nicorandil / another Ca / beta-bloker were administered when chest pain was not controlled. Using an iodinated fatty acid analogue, 15-(*p*-[iodine-123]iodophenyl)-3-(*R*,*S*)methylpentadecanoic acid (BMIPP), myocardial scintigraphies with intravenous adenosine triphosphate infusion were performed before cardiac catheterization and 12 mo after medical therapy. According to the medical control states, these 35 patients were classified into 3 groups; response (disappearance of angina attacks, 12 pts, 60 ± 11 years), partial response (angina attacks < 4/mo, 12 pts, 67 ± 10 years), and no response to therapy (angina attacks ≥ 4/mo, 11 pts, 71 ± 6 years). Reduced BMIPP uptake was observed in 24 (69%) of 35 patients before the treatment. Reduced BMIPP uptake was also found in 18 patients (51%) after 12 mo. Normal BMIPP uptake after 12 mo therapy was observed in about half (response: 42%, partial response: 58%, no response: 45%) of patients among the 3 groups. There was no difference regarding the value of washout rate (WOR) (response; 10 ± 7 (before), 14 ± 8% (12 mo)), partial response; 11 ± 7, 10 ± 5%, no response; 13 ± 9, 14 ± 8%) among the 3 groups. The defect scores of BMIPP in the three groups were not different during at least one year medical therapy. No difference regarding the distribution of other medical therapies (angiotensin converting enzyme inhibitors / angiotensin receptor blockers / beta-blockers / statins) was found. The administration of Ca and isosorbide dinitrate / nicorandil and 2 Ca was significantly higher in the poor than in the good control patients. ***Conclusions:*** Long-acting Ca over one year did not improve myocardial fatty acid metabolic images in patients with pure CSA. This may be related to silent ischemia.

Key words: fatty acid metabolism, coronary spastic angina, long-acting calcium antagonist