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Myocardial perfusion imaging in the evaluation of cardiac events after 8 years in non-symptomatic diabetic patients

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Background: Cardiovascular disease is a leading cause of death in world and in Brazil. Diabetes is an important risk factor for coronary artery disease (CAD). Diabetic patients (p) frequently have CAD and ischemia without symptoms. Myocardial perfusion imaging (MPI) is an established noninvasive method for detecting ischemia in symptomatic p, but in those asymptomatic is not yet defined.

Objectives: To verify in asymptomatic diabetic p who underwent MPI, presence of hard cardiac events (CE) as non-fatal myocardial infarction (MI) and cardiac death after 8 years. Secondary objective was to verify if perfusion abnormalities were associated with hard CE in this group.

Methods: it was a retrospective, observational study using the medical records of 436 p who performed MPI between in 2006 and was followed up until 2014 for assessment of hard CE and MPI abnormalities. Statistical analysis was performed by Fisher's exact test and logistic regression, being significant if $p \leq 0.05$.

Results: 53.9% men, 83% hypertensive, 73% with hyperlipidemia, 32% diabetic, 12.2% smokers, 50% had known CAD, 70% with high Framingham score, 21.8% with moderate and 8% with low risk. In MPI 53% were normal, 26% suggestive of fibrosis and 21% suggestive of ischemia. In evolution, 11p (25%) had MI and 10p (22%) died. From the diabetic group, 37.5% were suggestive of ischemia and 36.2% of fibrosis; 7 p (63.6%) had MI and 8 p (80%) died in evolution, $p=0.044$ and $p=0.002$, respectively. The group with normal MPI showed higher free time without CE. Fibrosis in MPI determined 22.09-fold increased risk of death in diabetic and all diabetic p with MI had previous MPI with ischemia ($p=0.001$).

Conclusions: The occurrence of hard CE in 8 years was high in diabetic patients even without cardiac symptoms and MPI maybe is an important non-invasive diagnostic tool to discriminate those who will present hard CE in evolution.

Biography

Paola Smanio is the Coordinator of the Nuclear Medicine Department of Fleury Group and Chief of Nuclear Medicine Department at the Institute Dante Pazzanese of Cardiology. She has a PhD in cardiology by Federal University of São Paulo-UNIFESP. She is member of the Scientific Committee of the Brazilian Society of Nuclear Medicine. She is specialist in cardiology by the Brazilian Society of Cardiology and in Nuclear Medicine by the Brazilian College of Radiology. Her fellowship was done at the University of Virginia-USA and recently staged for recycling at Emory University-USA. She has published several papers in journals and has been serving as an editorial board member of the National Journals of Cardiology and also of Nuclear Medicine. She has been involved with the guidelines of investigation of CAD in women. Her main line of research is to study the diagnosis of cardiovascular disease in asymptomatic diabetics and also investigation of cardiovascular disease in women.

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