

Measurement of exercise gas exchange during quantitative stress echocardiography might improve differentiation of myocardial ischemia from fibrosis

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KEYWORDS: exercise gas exchange, quantitative stress echocardiography, ischemia, fibrosis.

CITATION: *Cardiol Croat.* 2022;17(9-10):230. | <https://doi.org/10.15836/ccar2022.230>

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Introduction: Doppler myocardial imaging provides sensitive indicators for diagnosing subendocardial dysfunction, but their specificity is low¹. We wanted to establish whether exercise gas exchange measurement might improve differing myocardial ischemia from fibrosis.

Case report: In the case of 79-year-old woman with the history of the myocardial infarction and the left anterior descending artery stenting 7 years ago, quantitative exercise stress echocardiography was done due to emerging atypical chest pain. In mid anteroseptal segment, there was significant decrease in myocardial systolic velocity /delta Vs -73,83/, in deformation velocity /delta SR-88,96/ and deformation /delta S-62,21/. Deformation velocity was decreased in mid inferior segment as well /delta SR-20,23/. Measurement of exercise gas exchange showed slight decrease of oxygen consumption parameters /pVO₂ 76%, ATVO₂ 30%, O₂ pulse 67% of the predicted values and dVO₂/dWR 8.80 ml/min/W/ but without "ischemic threshold".

Conclusion: Measurement of exercise gas exchange during quantitative stress echocardiography might help differentiating myocardial ischemia from fibrosis.

RECEIVED:
October 26, 2022

ACCEPTED:
November 10, 2022



LITERATURE

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