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Is Coronary Circulation the Most Important Parameter for Right Ventricular Functions?

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Dear Editor,

We read the article entitled ‘The effect of slow coronary flow on right and left ventricular performance’ with great interest [1]. The authors evaluated the functions of the left and right ventricles in slow coronary flow in patients and control groups by means of tissue Doppler imaging and the myocardial performance index. They concluded that slow coronary flow affects left ventricular (LV) functions by reducing LV performance, but does not affect right ventricular (RV) functions [1]. This cross-sectional study is of interest and has the potential for being useful in clinical practice. Nevertheless, this finding seemed to contradict that of Zencir et al. [2] who reported that slow coronary flow did not affect LV functions. Altunkas et al. [1] also did not explain the mechanisms of

altered LV functions, for which there are several possible explanations. Balci et al. [3] suggested that the RV cavity has a thinner wall. Nouette-Gaulain et al. [4] showed that, in the case of chronic hypoxia, the mitochondrial energy metabolism-adaptation mechanisms in the right and left ventricles are different. Saari and Johnson [5] showed there to be distinct calcium kinetics in the right and left ventricles. Hence, the preserved RV functions could be explained by the mechanisms mentioned above. We wonder, however, whether the results would have been the same if the patients had been divided into 2 subgroups, i.e. RV circulation: right coronary artery and dominant circumflex artery, and LV circulation: left anterior descending artery and circumflex artery?

References

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