Once fitness is duly accounted for and an accurate measure of adiposity is used, the metabolically healthy but obese phenotype is a benign condition, with a better prognosis (30–50% lower risk) for mortality and morbidity than metabolically abnormal obese people. Interestingly, no difference in the prognosis is observed between metabolically healthy but obese individuals and metabolically healthy normal-fat individuals once fitness is accounted for, suggesting a key role of fitness in these associations.

Acknowledgements

We thank the Cooper Clinic physicians and technicians for collecting the baseline data, and staff at the Cooper Institute for data entry and data management.

Funding

This study is supported by National Institutes of Health grants AG06945, HL62508, and R21DK088195, an unrestricted research grant from The Coca-Cola Company, by the Spanish Ministry of Science and Innovation (RYC-2010-05957, RYC-2011-09011) and the Swedish Heart-Lung Foundation (20090635). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Conflict of interest: none declared.

References

The list of references is available in the online version of this paper.

PET/CT and SPECT/CT cardiac fusion imaging in a patient with Takotsubo cardiomyopathy

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An 85-year-old female was referred with chest pain. The electrocardiogram showed ST-elevation in the precordial leads. A routine biological evaluation showed increased troponin T (1.32 ng/mL), total creatine kinase (CK) (687 IU/L), and CKMB (60.0 IU/L). Emergent coronary arteriography showed no stenosis and revealed acetylcholine-inducible spasm of the right coronary artery (RCA). Left ventriculography and transthoracic echocardiography demonstrated remarkable apical ballooning and hyperdynamic contraction of the basal segment (Panel A). Therefore, we diagnosed the patient with Takotsubo cardiomyopathy. 99mTc-sestamibi (MIBI) and 123I-beta-methyl iodophenyl pentadecanoic acid SPECT and 18F-fluorodeoxyglucose (18F-FDG) PET were performed on Days 5 and 6. 123I-beta-methyl iodophenyl pentadecanoic acid images revealed a severely reduced uptake in the apex and a slightly reduced uptake of MIBI in the same region (Panels B and C). These results demonstrated severely impaired fatty acid metabolism rather than myocardial perfusion during the acute phase. The 18F-fluorodeoxyglucose PET image showed an obvious focal FDG accumulation in the apex. (Panel D). In this case, 18F-FDG injection was performed after prolonged fasting, unlike the procedure followed in the standardized glucose loading state. The normal myocardium primarily utilizes free fatty acids in the fasting state, and physiological accumulation of 18F-FDG in the normal myocardium was inhibited. Therefore, high uptake of 18F-FDG in the fasting state suggests an impaired myocardium, including the presence of inflammation. In summary, SPECT/CT and PET/CT fusion imaging revealed increased glucose metabolism probably due to inflammation and a reduction of fatty acid metabolism that was inconsistent with a spastic lesion of the RCA. Transthoracic echocardiography demonstrated complete resolution of left ventricular wall motion within 1 week.

Supplementary material is available at European Heart Journal online.