

CVD' and timely it is indeed to make prevention of CVD the health priority that it should be.²⁶

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References

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

CARDIOVASCULAR FLASHLIGHT

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Utility of multimodal cardiac imaging with PET/MRI in cardiac sarcoidosis: implications for diagnosis, monitoring and treatment

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A 30-year-old male presented with dyspnoea and pulmonary oedema. Echocardiography revealed a severely reduced LV-function (EF: 25%). Coronary heart disease was excluded by angiography (Panel H). Owing to bilateral hilar lymphadenopathy on chest X-ray (Panel A), we performed a simultaneous positron emission tomography/magnetic resonance imaging (PET/MRI) study. Representative for sarcoidosis, a strong ¹⁸F-fluorodesoxyglucose (FDG) uptake under fasting conditions was located at the pulmonary lymph nodes (Panel B). On MRI, late gadolinium enhancement (LGE) was observed in the lateral wall confirming myocardial infiltration (Panel C). T2-weighted images revealed diffuse areas with an increased signal consistent with myocardial oedema (Panel D). Furthermore, reduced perfusion (Panel E) and increased FDG uptake (Panel F) in the anterolateral wall is a common finding in cardiac sarcoidosis (CS) indicating active inflammation.

The clinical course of CS varies from benign to life-threatening with sudden cardiac death and severe heart failure. The decision for drug therapy alone or primary preventive ICD-therapy in early stage CS remains challenging. Treatment was started using corticosteroids and a medical heart failure regime. However, MRI after 4 months revealed still impaired LV-function of 27% (Panel G). This finding and the presence of a complete left bundle branch block provided the indication for cardiac resynchronization therapy (CRT-D) (Panel I). To avoid lead placement in scar tissue, implantation was guided by LGE images. Our patient showed an improvement in functional status and LV-function of absolute 8% at follow-up.

Therefore, serial assessment of oedema and LGE by MRI as well the inflammatory status using FDG PET may be helpful for therapy monitoring and guidance of primary preventive device therapy.

