

FOCUS ISSUE ON CARDIAC SARCOIDOSIS

Focus Issue on Cardiac Sarcoidosis from ICNC- 12 Symposium on Advanced Imaging in Cardiac Sarcoidosis

Terrence D. Ruddy, FRCPC, FACC, FASNC

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Abstract

Cardiac sarcoidosis can result in significant symptoms due to conduction abnormalities, ventricular arrhythmias and heart failure. The clinical diagnosis of cardiac sarcoidosis can be difficult but can be assisted with advanced cardiac imaging including positron emission tomography (PET) with ^{18}F -fluorodeoxyglucose (FDG) and cardiac MR with late gadolinium enhancement.

Keywords: Cardiac sarcoidosis, FDG Cardiac PET, Cardiac MR

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Sarcoidosis is a multisystem disease, characterized by non-caseating granulomas on pathology. The importance of cardiac involvement has become more appreciated recently and identifies patients with a poor prognosis compared to patients without cardiac involvement (1). Advanced imaging of cardiac sarcoidosis in sarcoidosis was a focus of an international symposium on May 5, 2015 at the International Congress of Nuclear Cardiology and Cardiac CT (ICNC-12). This ICNC meeting has been an international scientific event for over 20 years and is co-organized by the American Society of Nuclear Cardiology (ASNC), the European Association of Cardiovascular Imaging (EACVI), a registered branch of the European Society of Cardiology (ESC) and the European Association of Nuclear Medicine (EANM). Drs. Keiichiro Yoshinaga of Hokkaido University Graduate School of Medicine and Thomas Schindler of Johns Hopkins University presented at the Symposium and have prepared two new articles for the Annals of Nuclear Cardiology (ANC) based on their presentations.

Cardiac sarcoidosis is under-diagnosed and under-appreciated but can result in symptoms in about 5% of patients with systemic sarcoidosis. Symptoms depend

on the activity of the disease as well as location and extent (2) and can result in conduction abnormalities, ventricular arrhythmias and heart failure (2). Recently, the Heart Rhythm Society issued an Expert Consensus Statement on the Diagnosis and Management of Arrhythmias Associated with Cardiac Sarcoidosis with endorsement by leading cardiology societies (3). Essentially, cardiac sarcoidosis should be suspected in patients with systemic sarcoidosis and cardiac symptoms as well as young or middle-aged patients (age < 60 years) with unexplained atrio-ventricular block or ventricular arrhythmias.

A diagnosis of cardiac sarcoidosis can be difficult as the disease is usually not homogenous in distribution and often is in a patchy pattern. Myocardial biopsy has poor sensitivity. Similarly, conventional diagnostic testing with electrocardiography, echocardiography, and nuclear imaging may also have low sensitivity. Advanced cardiac imaging including positron emission tomography (PET) with ^{18}F -fluorodeoxyglucose (FDG) and cardiac MR with late gadolinium enhancement may greatly help with both diagnosis and evaluation of therapy (3). The Japanese Society of Nuclear Cardiology issued Recommendations (4) for ^{18}F -FDG Positron

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Terrence D. Ruddy

University of Ottawa Heart Institute 40 Ruskin Street, Room H1220 Ottawa, Ontario, Canada K1Y 4W7

E-mail: truddy@ottawaheart.ca

Emission Tomography Imaging for Cardiac Sarcoidosis in 2014. These guidelines describe the optimal patient preparation prior to ^{18}F -FDG administration, the preferred imaging acquisition and processing protocol, approach to image interpretation and reporting.

The recently HRS Consensus Expert Statement suggests algorithms for investigation of patients using advanced cardiac imaging and represents a starting point with most clinicians. However, more multicenter collaborative research is required to better define the role of advanced cardiac imaging and the various treatment options for patients with cardiac sarcoidosis.

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Conflicts of Interest

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Reprint requests and correspondence :

Terrence D. Ruddy,
University of Ottawa Heart Institute 40 Ruskin Street,
Room H1220 Ottawa, Ontario, Canada K1Y 4W7
E-mail : truddy@ottawaheart.ca

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