

IMAGE IN CARDIOLOGY

Incidental cardiac findings on cardiac CT with prognostic impact[☆]

Achados cardíacos com impacto prognóstico por AngioTC cardíaca

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Received 16 June 2011; accepted 8 September 2011

Available online 23 December 2011

Introduction

The value of cardiac computed tomography (CT) in the assessment of coronary anatomy is well established.¹ This technique also enables visualization of other cardiac structures, with constantly improving resolution, and incidental findings are thus relatively common.

The authors present three cases of intracardiac findings during cardiac CT.

Case 1

A 20-year-old man complaining of chest pain was referred for cardiac CT to exclude coronary artery anomalies. The exam showed coronaries with normal origin and course, but contrast was observed passing from the left atrium (LA) to the right atrium, raising the suspicion of a communication between the two chambers. Transesophageal echocardiography confirmed the diagnosis of ostium

secundum-type atrial septal defect (Figure 1), which was closed surgically.

Case 2

A 50-year-old man with a history of type 2 diabetes, permanent atrial fibrillation and chest pain, was referred for cardiac CT to exclude coronary disease. The exam revealed non-significant coronary disease, dilated LA and a subtraction image in the left atrial appendage suggestive of thrombus (Figure 2). The diagnosis could have been confirmed by a second scan a few minutes after the first or by transesophageal echocardiography, but these were not performed because the results would not have altered the therapeutic approach. The patient was prescribed oral anticoagulation.

Case 3

A 58-year-old man with known coronary disease, who had previously undergone angioplasty of the proximal anterior descending artery, experienced recurrence of angina and was accordingly referred for cardiac CT to assess stent patency. The exam excluded progression of coronary disease but revealed asymmetrical left ventricular hypertrophy and a ventricular septum of 36 mm (Figure 3), compatible with

[☆] Please cite this article as: Almeida, C. Achados cardíacos com impacto prognóstico por AngioTC cardíaca. doi:10.1016/j.repc.2011.09.020.

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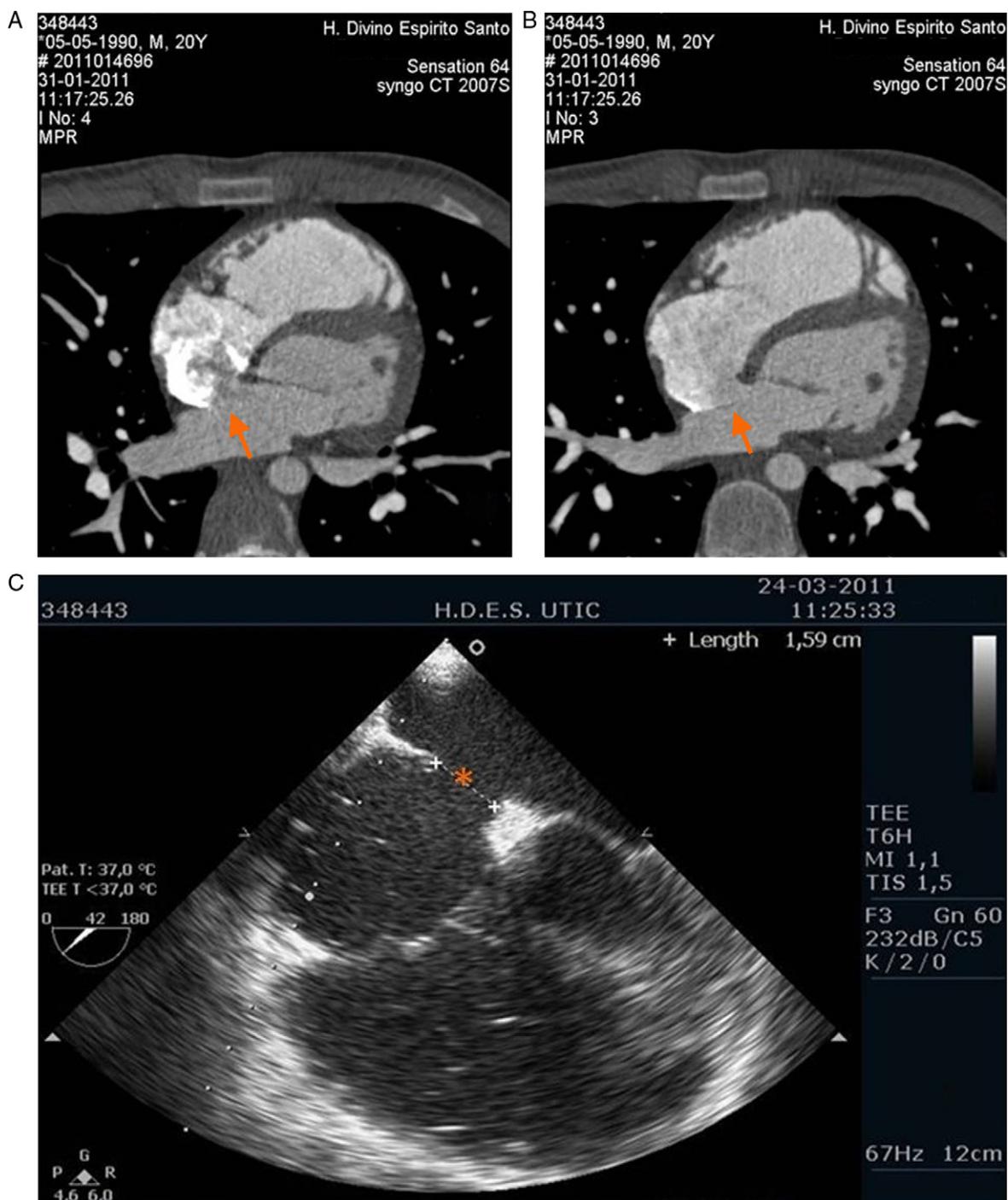


Figure 1 Ostium secundum-type atrial septal defect (A and B – cardiac CT; C – transesophageal echocardiogram). A: passage of contrast from left to right atrium (arrow). B: communication between left and right atria (arrow).

hypertrophic cardiomyopathy. A cardioverter-defibrillator was implanted and to date no appropriate therapies have been recorded.

Discussion

Cardiac CT is one of the most useful diagnostic techniques available to cardiologists. Advances in CT equipment,

particularly in improved spatial resolution, shorter acquisition times and lower radiation doses, have made it possible to diagnose a growing range of cardiac disorders with increasing precision.

The authors present three cases in which cardiac CT was performed initially to exclude coronary disease but succeeded in diagnosing other cardiac disorders, leading to changes in treatment.



Figure 2 Thrombus in the left atrial appendage (*: thrombus; 1: dilated left atrium).



Figure 3 Hypertrophic cardiomyopathy.

Several articles have been published on extracardiac findings diagnosed by cardiac CT.² However, the intracardiac

findings with prognostic impact presented here highlight the usefulness of this modality in diagnosing other cardiac disorders.

Conflicts of interest

The authors have no conflicts of interest to declare.

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