

($P = .2$) (Figure A). Lastly, we studied the influence of multipoint pacing on LV ejection fraction, comparing the conventional, baseline and MPP groups [25.1% (3.2), 31.8% (3.0), and 37.8% (4.2) respectively]. Compared with the baseline group, the mean increase in LV ejection fraction was greater in the MPP group than in the conventional group: 12.7% ($P = .055$) vs 6.7% ($P = .58$) (Figure B).

This prospective single-center study describes the first use of multipoint pacing in Spain. The hemodynamic data obtained from multipoint pacing are promising, because they show an improvement on the outcome of traditional resynchronization. Use of simultaneous stimulation from multiple points of the LV could lead to a reduction in the rate of non-responders and further improvement for those who do respond.

The main limitation of the study is the small sample size, and therefore further validation is required with larger-scale studies. Also, the study used acute hemodynamic data, so medium- and long-term follow-up is required to assess the clinical benefit of multipoint pacing.

Pau Alonso,* Ana Andrés, Joaquín Osca, Oscar Cano, María José Sancho-Tello de Carranza, and José Olagüe de Ros

Unidad de Arritmias, Servicio de Cardiología, Hospital Universitario y Politécnico La Fe, Valencia, Spain

* Corresponding author:.

E-mail address: pau_i_au@hotmail.com (P. Alonso).

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Nonsyndromic Familial Aortic Disease: an Underdiagnosed Entity



Enfermedad aórtica familiar no sindrómica: una entidad infradiagnosticada

To the Editor,

We report the case of a 55-year-old woman with no remarkable history who had a type B aortic dissection in August 2008. Computed tomography showed a large dissection opening after the exit of the left subclavian artery and extending to the iliac bifurcation. The descending thoracic aorta was dilated (60 mm) with partial thrombosis of the false lumen. The aortic valve was trileaflet and showed normal function, and the ascending aorta was of normal size. In the absence of acute complications, treatment with beta-blockers was chosen and endovascular treatment was deferred. Since the aortic arch had an acute angle, and the distance between the subclavian artery and the left carotid was short, there was insufficient neck for proximal stent implantation, and consequently a 2-pronged intervention was indicated: an aortobicarotid bypass followed by endovascular treatment. In February 2010, we proceeded with the aortobicarotid bypass, which was complicated by retrograde dissection of the ascending aorta from the clamp point and so the middle and distal ascending aorta were replaced with a Hemashield 28 vascular prosthesis. Follow-up showed progressive dilation of the descending thoracic aorta (Figure 1), despite which the patient refused all intervention.

In August 2011, the patient reported that the 38-year-old son of a second cousin had experienced a type B aortic dissection. This relative, who had no previous history, had been admitted to another hospital for aortic dissection originating after the exit of the left subclavian artery and progressing to the iliac bifurcation. At the time of the dissection, there was a slight dilation of the

descending thoracic aorta (39 mm), with a trileaflet and normally functioning aortic valve and without dilatation of the remaining aortic segments. The diagnostic approach then shifted to familial aortic disease; a thorough physical examination of both patients was performed, which showed no signs of Marfan or Loeys-Dietz syndrome, and a genetic analysis of the *ACTA2* gene (encoding isoform 2 of alpha actin in vascular smooth muscle cells) in the second patient was requested. The analysis showed a novel heterozygous mutation (c.253G>A) resulting in an amino acid change (p.Glu85Lys). The same mutation was also detected in the index case and in the father, paternal uncle and the daughter of the second case, and in the sister, paternal aunt, daughters, and niece of the index case (Figure 2). None of the *ACTA2* mutation carriers had *iris flocculi* or *livedo reticularis*, characteristics that have previously been described in the context of mutations in this gene.¹ Considering the familial aortic disease and aortic fragility observed during surgery, it was decided to avoid endovascular treatment and the patient underwent open surgery to replace the descending thoracic aorta with a tube graft with reimplantation of the visceral vessels.

Although most type B aortic dissections occur in middle-aged patients with hypertension and/or atherosclerosis, a considerable proportion of patients show early presentation with a likely, but not well-understood, genetic basis. In the absence of an identifiable syndrome, up to 21.5% of patients with aortic aneurysms have a family history; genetic mutations are identified in 20%,² the most common being the mutation in *ACTA2* (10–14%).³ This mutation is associated with aortic disease with 48% penetrance and variable expressivity, most often in the form of type A aortic dissections, even with nonsignificantly dilated aortic diameters, and isolated cases of type B⁴ dissections; it has also been associated with premature coronary artery and cerebrovascular disease.¹

Although family screening with imaging of the first-degree relatives of patients with premature aortic disease may be reasonable, indications for genetic analysis are not well established.

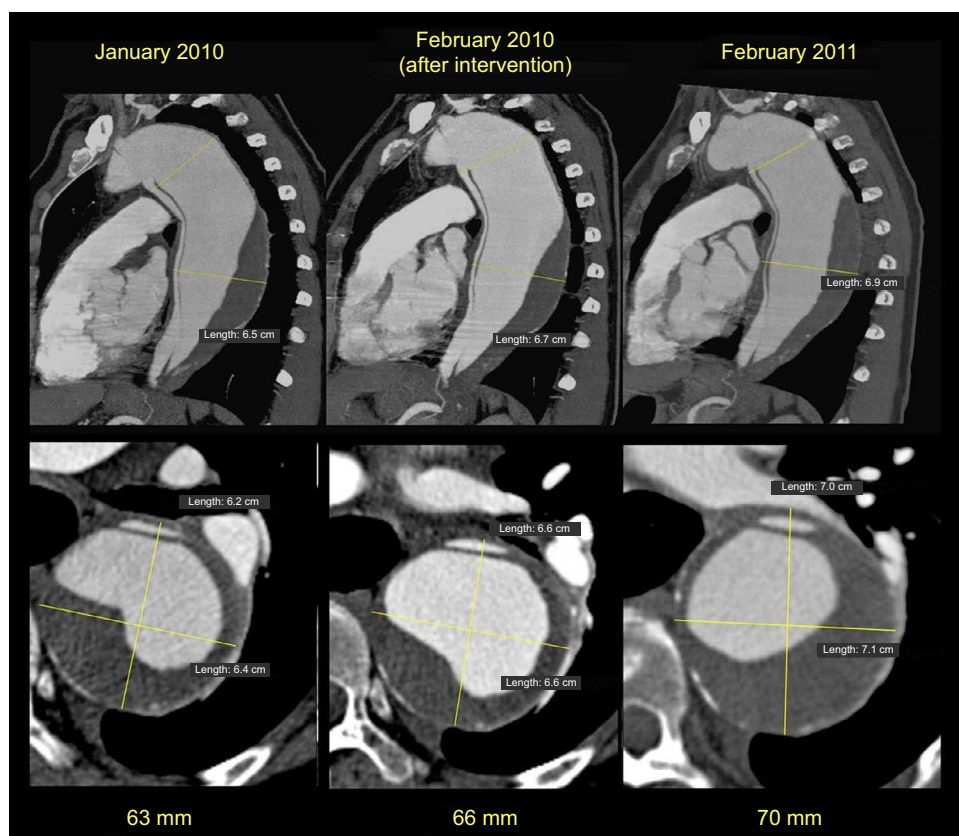


Figure 1. Type B aortic dissection. Computerized tomography follow-up scans showing progressive dilatation of the descending thoracic aorta.

The clinical practice guidelines of the American Heart Association/American College of Cardiology recommend screening for mutations in *ACTA2* in cases of familial aggregation of aortic disease⁵. However, it is important to note that penetrance is low and expressivity variable, which makes it difficult to track asymptomatic carriers of the mutation.

A noteworthy aspect of this case is the importance of the suspected diagnosis of familial aortic disease in young patients with aortic disease, which should make us insist on questioning

patients about their family history and rule out syndromic cases. Another important point is that the diagnosis of familial aortic disease makes it reasonable (without the support of clinical trials) to change therapeutic strategies. As in Marfan syndrome and other connective tissue diseases,⁶ stent implantation may be contraindicated unless used as a bridge to surgery. Finally, it should be borne in mind that familial aortic disease may affect only the descending aorta and there is a risk of dissection even without marked aortic dilation.

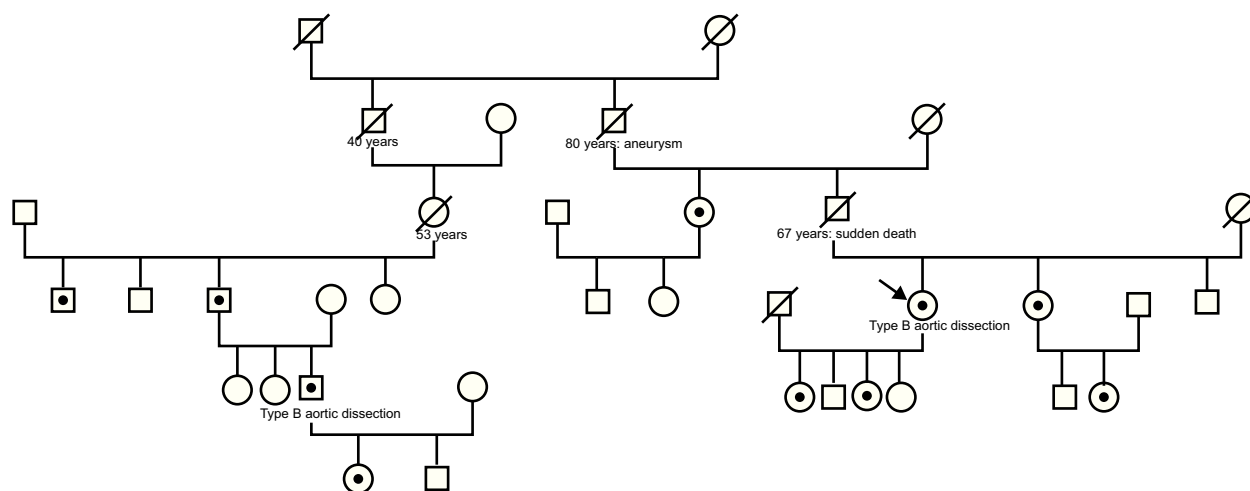


Figure 2. Family tree. Arrow, index case; square/circle with a dot, *ACTA2* mutation carrier; barred square/circle, deceased.

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Gisela Teixidó-Turà,^{a,*} Irene Valenzuela,^b Laura Gutiérrez,^a Mar Borregan,^b Miguel del Campo,^b and Artur Evangelista^a

^aServicio de Cardiología, Hospital Universitari Vall d'Hebron, Barcelona, Spain

^bServicio de Genética, Hospital Universitari Vall d'Hebron, Barcelona, Spain

* Corresponding author:.

E-mail address: gteixido@vhebron.net (G. Teixidó-Turà).

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Detection of ICD Electrode Infection using ¹⁸F-fluorodeoxyglucose Positron Emission Tomography-computed Tomography



Detección de infección del electrodo del DAI mediante tomografía por emisión de positrones-tomografía computarizada con ¹⁸F-fluorodesoxiglucosa

To the Editor:

The implantable cardioverter-defibrillator (ICD) is a device used to treat patients with ventricular arrhythmias or who have high risk thereof. Infection of the ICD device is a rare but potentially

lethal complication (0.8% incidence). Infection may occur in the area of the generator, in the subcutaneous route of the electrodes, or in the intravenous portion of the electrodes, with or without endocarditis. These infections can be treated using three approaches: antibiotics, complete removal of the device (medical treatment alone is associated with higher mortality and recurrence), and implantation of a new ICD in another location.¹

Infections can be classified as early or late, depending on whether they develop within 60 days or more than 365 days after ICD implantation. Early infections are caused by intraoperative contamination or hematogenous seeding following surgery. Late infections are caused by episodes of transient bacteremia from any source or by skin erosions over the generator pocket.¹

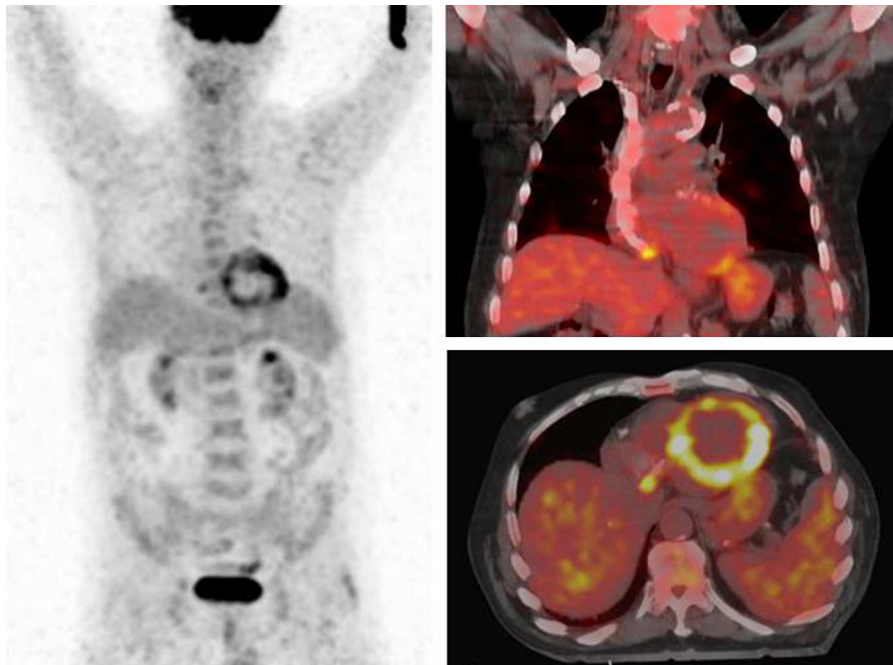


Figure. Full body volumetric positron emission tomography, and coronal and axial positron emission tomography-computed tomography fusion images.