Complete atrioventricular block in a young adult due to calcified damage of the His bundle system

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A 23-year-old white man was admitted to the intensive care unit for syncope. He did not report any history of heart disease. An electrocardiogram showed complete atrioventricular block with a slow ventricular escape rhythm of 40 beats/min. Laboratory tests showed no elevation of inflammation markers.

The patient underwent transfemoral temporary right ventricular pacing.

An echocardiographic four-chamber view (Figure 1A) showed a large hyperechogenic nodule in the anterior basal septum. A short-axis view in systole (Figure 1B) showed a reduction of aortic valve opening consistent with mild stenosis, while the short-axis view in diastole showed a bicuspid aortic valve with a hyperechogenic rim (Figure 1C).

Axial images by cardiac computed tomography showed the presence of a mass suggestive of calcium in the region of the aortic valve (Figure 2A), involving both the aortic valve and the basal interventricular septum (Figure 2B) (1,2).

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Figure 1) Echocardiography. **A** Four-chamber view showing a large hyperechogenic nodule in the anterior basal septum (arrow). **B** Short-axis view in systole showing a reduction of aortic valve opening consistent with mild stenosis. **C** Short-axis view in diastole showing a bicuspid aortic valve with a hyperechogenic rim (arrow). AO Aortic valve; LA Left atrium; LV Left ventricle; RA Right atrium; RV Right ventricle

Figure 2) Axial images by cardiac computed tomography showing the presence of a mass suggestive of calcium in the region of the aortic valve (arrow in **A**), involving both the aortic valve and the basal interventricular septum (arrow in **B**). AO Aortic valve; LA Left atrium; LV Left ventricle; RA Right atrium; RV Right ventricle

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