Left ventricular outflow tract obstruction secondary to accessory mitral valve tissue: a multimodality imaging approach

Vergé Marie-Philippe*, Jayle Christophe, Varroud-Vial Nicolas, and Christiaens Luc-Philippe

Service de Cardiologie, Centre Hospitalier de Poitiers, Poitiers, France

* Corresponding author. Tel: +33 630804792, Fax: +33 549443831, Email: scollyfr@yahoo.fr

A 48-year-old male was referred to our hospital department for septal alcohol ablation of a hypertrophic obstructive cardiomyopathy, known for 4 years. Despite the treatment with β-blockers, then isoptine and disopyramide, he was still symptomatic with a disabling exertional dyspnoea.

The cardiac-CT with retrospective acquisition found non-significant coronary artery disease. The septal wall was 12-mm thick. Moreover, we observed a very unusual excess tissue of the mitral valve projecting in the left ventricular outflow tract in systole (Panel B).

This aspect of mechanical obstruction was confirmed by a second transthoracic echocardiography, which emphasized a redundant mitral valve tissue with a maximal systolic left ventricular outflow gradient of 80 mmHg when the redundant tissue was close to the interventricular septum (Panel A).

The cardiac MRI confirmed the presence of an accessory mitral valve tissue which obstructed the left ventricular outflow tract, responsible for an acceleration of the flow in the systolic phase (Panel C).

After debating with the heart-team, surgery was indicated due to the symptomatic obstruction of the accessory tissue despite medical treatment.

An excision of the accessory valve mitral tissue located at the ventricular of the anterior mitral valve leaflet was done under control of trans-oesophageal echocardiography (Panel D). In spite of respecting the mitral valve leaflets, the appearance of a moderate mitral regurgitation during the procedure, led the surgeon to a replacement of the mitral valve with a mechanical prosthesis (Supplementary material online).

This case-report highlights the usefulness of systematically ruling out a mechanical obstruction, before reaching the conclusion of dynamic obstruction relative to a classical hypertrophic obstructive cardiomyopathy.

Supplementary material is available at European Heart Journal online.

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