Double-chambered left ventricle and partial atrioventricular canal

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A 35-year-old asymptomatic woman was referred to our echocardiography laboratory for the evaluation of a grade 2/6 systolic murmur. Transthoracic echocardiography showed the presence of a muscle band presenting as a finger-like projection into the left ventricle, which delimited an accessory chamber (Panels A and B, and see Supplementary data online). Additional findings were an ostium primum defect (Panel C and see Supplementary data online), a ventricular septal defect (Panel D and see Supplementary data online), and two atrioventricular valves separated but aligned on the same plane with a cleft of the left (mitral) valve (Panel E and see Supplementary data online). These features were suggestive of a double-chambered left ventricle with an associated partial atrioventricular canal. Transoesophageal echocardiography provided useful informations about the anatomy of the atrioventricular valves and their relationship with atrial and ventricular septum (Panel F and see Supplementary data online). Cardiac magnetic resonance confirmed the diagnosis, providing additional details about the anatomy and position of the muscle band, although the atrioventricular septal defect was less defined with this technique (Panels G and H, and see Supplementary data online).

To the best of our knowledge, this is the first reported case of concomitant double-chambered left ventricle and partial atrioventricular canal.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.