Isolated ventricular non-compaction (IVNC) is a genetically determined cardiac disease mainly involving the left ventricle. Since the first description and recognition of IVNC as a distinct cardiomyopathy, many cases have been described. However, the associated right-sided cardiac anomalies are unusual. Two cases of IVNC showing associated right-sided pathology on transthoracic echocardiography are presented.

**KEYWORDS**

- Left ventricular non-compaction
- Cardiomyopathy

A 46-year-old woman was evaluated in the emergency room because of dyspnoea and abdominal pain secondary to a pelvic mass. The presence of a systolic murmur led to further cardiological investigation. Transthoracic echocardiography demonstrated apical hypertrophy of both ventricles with a prominent trabecular meshwork and deep intertrabecular sinusoids. The ratio between this non-compacted portion of the myocardium and the normally structured myocardium was >2. Additionally, an apical displacement of the septal tricuspid leaflet (15 mm) with mild ventricular atrialization was present. Therefore, the findings are consistent with non-compaction of the left ventricle with right ventricular involvement and a mild form of Ebstein’s anomaly (Figure 1).

A 58-year-old woman with exertional dyspnoea had a transient ischaemic attack and multiple cutaneous embolization. Transthoracic echocardiography revealed a dilated left ventricle with severely reduced ejection fraction and typical findings of left ventricular non-compaction in the apical and infero-lateral myocardium (Figure 2). In addition, a diverticulum in the subtricuspidal lateral right ventricular wall was seen.

**Discussion**

After the first description of non-compaction cardiomyopathy, an isolated left ventricular involvement was supposed. Over the following years, some cases with right-sided cardiac abnormalities have been reported. Nevertheless, diagnostic criteria of isolated ventricular non-compaction (IVNC) are focused on description of the left ventricle. Most notably, the absence of coexisting cardiac abnormalities have been supposed as one of the criteria for diagnosis of IVNC. The two presented cases delineate that right-sided and valvar cardiac abnormalities may...
accompany IVNC. Therefore, comprehensive echocardiographic investigation is mandatory in case of IVNC.

**References**


**Figure 2** (A) Apical view of the left ventricle demonstrating non-compaction of the infero-apical wall (arrows). (B) End-diastolic (D) and end-systolic (S) stop frame showing the subtricuspidal diverticulum within the right ventricle (asterisk). RV, right ventricle; LV, left ventricle; RA, right atrium; LA, left atrium.