

A chiari network mimicking a cystic structure

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Abstract The Chiari network is a net-like mobile structure, occasionally encountered near the entrance of the inferior vena cava in the right atrium. Due to its fenestration, the Chiari network does not cause flow obstruction of the blood. The Chiari network is usually an incidental finding with no further clinical consequences. We report an unusual presentation of a Chiari network, mimicking a right atrial oscillating cystic mass attached to the interatrial septum by a thin stalk.

Keywords Chiari network · Cystic structure · Echocardiography

Image

A 66-year-old man suffered from a cerebrovascular insult. The ECG showed sinus rhythm. Holter tape recording did not demonstrate paroxysmal atrial fibrillation. The transthoracic echocardiographic (TTE) study showed a preserved left and right ventricular systolic function. An oscillating cystic structure, attached to the interatrial septum (IAS) by a thin stalk, was seen in the right atrium. (Fig. 1, Video 1)

Further analysis by TEE revealed an elongated Eustachian valve and a large mobile Chiari network.

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(Fig. 2, Video 2 and 3) The Chiari network was identified as the structure causing the pseudocystic image, which had been seen on TTE. Intravenous injections of agitated colloid solution could not demonstrate a punched out lesion consistent with a cyst. Furthermore, a patent foramen ovale was excluded.

The Chiari network, a remnant of the right valve of the sinus venosus, is a mobile net-like structure occasionally seen in the right atrium near the opening of the inferior vena cava and coronary sinus. Due to its fenestration, the Chiari network does not cause flow obstruction of the blood. It is usually an incidental finding with a reported prevalence ranging from 2 to 13.6 % in echocardiography studies and autopsy series [1–3]

Prevention of pulmonary embolism due to entrapment of thrombi, originating from the deep venous system, in the

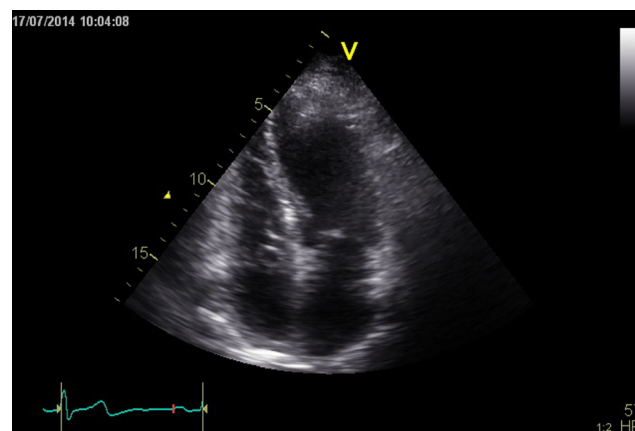
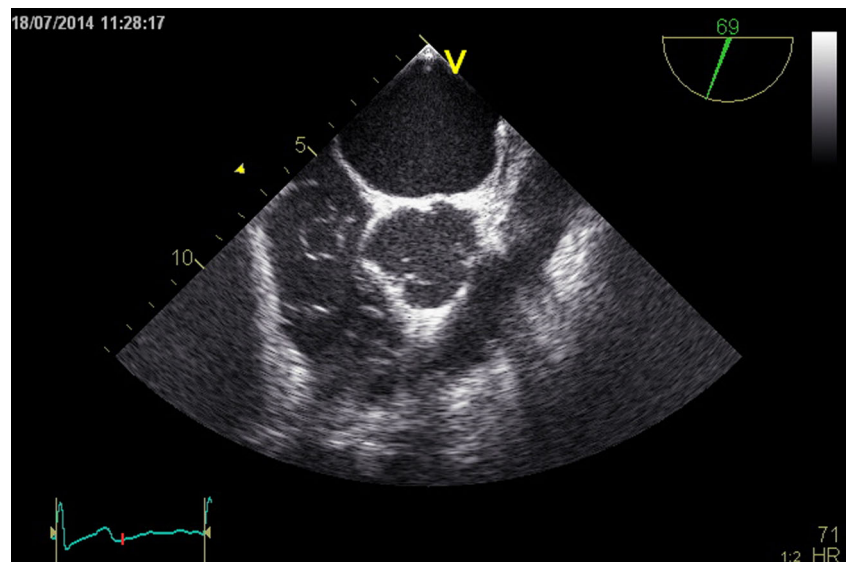


Fig. 1 The TTE four-chamber view demonstrates a cystic mass attached to the interatrial septum by a thin stalk in the right atrium. (See also Video 1)

Fig. 2 TEE image at 69° shows the large Chiari network in the right atrium. (See also Video 2)



Chiari network has occasionally been reported [4] A few medical case reports have described entrapment of catheters in the Chiari network during invasive procedures [5] Rarely, the Chiari network is identified as the site of infective endocarditis.

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Conflicts of interest None.

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