Large Eustachian valve and kyphoscoliosis

A 61 year old woman presented with breathlessness to a district general hospital. A transthoracic echocardiogram was performed to assess left ventricular (LV) function. The LV systolic function was good. Incidentally, a mass was detected in the right atrium. She was subsequently referred to the tertiary centre for a transoesophageal echocardiogram (TOE) to examine the mass.

The TOE demonstrated an elongated structure at the orifice of the inferior vena cava (IVC). Colour Doppler showed blood flow from the IVC being directed towards the foramen ovale. The anatomical position of the structure suggests that it is a thicker than usual Eustachian valve. The structure appears stiff and does not have the normal undulating movement of a Eustachian valve. Nevertheless, the TOE demonstrated its embryonic function redirecting venous flow.

The patient had marked kyphoscoliosis causing difficulty in intubation and manipulation of the TOE probe. It is possible that the transthoracic images became distorted and the Eustachian valve appeared as a mass because of the impact of kyphoscoliosis on the orientation of the heart.

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