

Atrial Septal Aneurysm: A Major Diagnostic Clue for a Patent Foramen Ovale



FIGURE 1. (A) Transthoracic echocardiography imaging revealed a typical half-moon-shaped atrial septal aneurysm (arrow) in the apical four-chamber view. (B) Incompetence of the interatrial septum is seen during contrast bolus injection. Hereby transit of contrast-medium from right to left is clearly evident (arrow).

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CASE

Abnormalities of the atrial septum are relatively common and usually congenital in origin[1]. One prominent example is an atrial septal aneurysm (ASA), a saccular deformity of the interatrial septum. Most ASAs are associated with atrial septal defects (ASDs), usually exposed as a patent foramen ovale (PFO).

We describe a clinical case of a 23-year-old, healthy medical student who volunteered for a routine transthoracic echocardiography (TTE) as a part of the students' physical examination course. During the

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echocardiogram, an apical four-chamber view revealed an exaggerated mobility of the atrial septum, a classic sign of an ASA (Fig. 1; Panel A; Arrow).

The gold standard for diagnosing PFO is to perform a transesophageal echocardiography (TEE)[2]. In our case, given that the ASA was an incidental finding, the subject was asymptomatic, and the risks associated with performing a TEE, we used the TTE to prove interatrial septal permeability. Valsalva's maneuver was performed to increase intrathoracic pressure, venous contrast medium was injected, and a clear passover of bubbles from the right to the left atrium was observed (Fig. 1; Panel B; Arrow). Thus, presence of a PFO was diagnosed.

Due to lack of clinical conditions such as thromboembolism, stroke, platypnea-orthodeoxia, migraine headaches, or practicing sport diving, which would make a PFO closure indicated, no interventions were recommended[3,4,5].

We report this casuistics to strengthen the clinical spotlight on the interatrial septum. If an ASA is apparent in TTE, it is obligatory to exclude a PFO, and in this case, we back up the hypothesis that contrast-enhanced TTE often possess high accuracy and economical benefit compared with TEE[6]. Therefore, a TTE should be the initial test to evaluate for the presence of an associated PFO.

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