

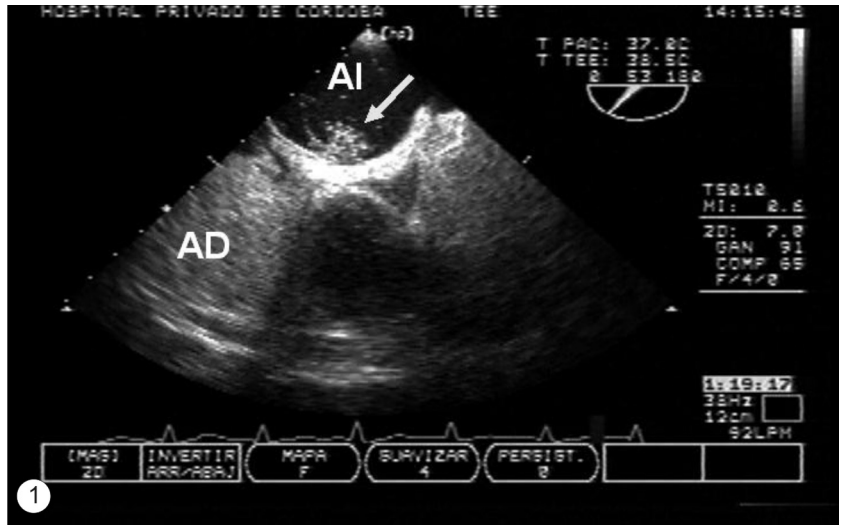
## Patent Foramen Ovale in Older Patients

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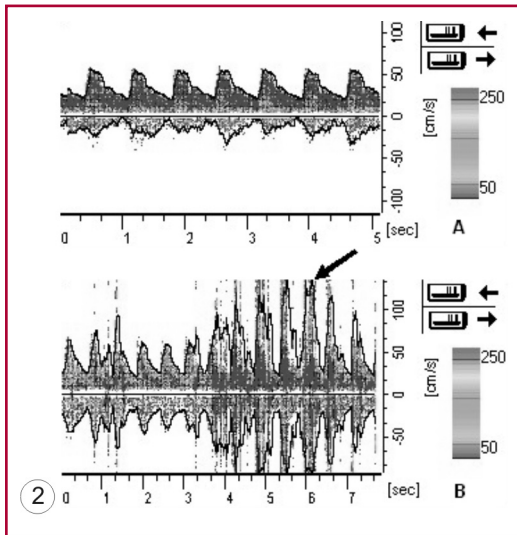
Almost a quarter of the general population may have patent foramen ovale (PFO), as well as around 30% of patients with cryptogenic stroke. (1) There are evidences of the association between the presence of PFO and cryptogenic stroke both in young patients and in those older than 55 years. (2)

When assessing these patients, determining the size or severity of PFO, as well as the presence of associated lesions (for example, atrial septal aneurysm), has clinical relevance. While transesophageal echocardiography (TEE) is the golden method for diagnosis, simultaneous transcranial Doppler can be useful for PFO quantification. (3)

These are images of a male patient aged 70, with hypertension and a history of transient ischemic attack (TIA) 5 years ago, and 40% right carotid stenosis, treated with aspirin. Two years later, he had a new TIA episode, from which he fully recovered. Now, he is hospitalized due to paresis of left hemisphere; a new echo-Doppler of the neck vessels showed carotid atheromatosis with no progression of the disease. A TTE was performed in combination with contrast transcranial Doppler ultrasound; a large PFO was detected (right-to-left passage with Valsalva maneuver greater than 20 bubbles) (Figure 1), with atrial septal aneurysm and shower effect in transcranial Doppler of middle cerebral artery (Figure 2). Despite the lack of clear evidence, (1) percutaneous closure of PFO was recommended due to right to left shunting and recurrent ischemic events.



**Fig. 1.** Transesophageal echocardiography with bubble contrast (arrow). RA: Right Atrium. LA: Left Atrium.



**Fig. 2. A.** Basal transcranial Doppler of the right middle cerebral artery. **B.** Right middle cerebral artery with shower effect (arrow) due to significant bubble passage.

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