

Chiari Network and Paradoxical Embolism. Response



Red de Chiari y embolia paradójica. Respuesta

To the Editor,

We have read the comments of Martínez-Quintana et al concerning the article entitled “Giant Chiari Network, Foramen Ovale, and Paradoxical Embolism”¹ with interest.

As Martínez-Quintana et al argue, paradoxical embolism should mainly be taken into account in young patients in whom there is no other cause to explain the occurrence of the stroke. Although the patient in the reported case exhibited other risk factors, the stroke he had experienced years before the intervention could not be attributed to them with absolute certainty. Moreover, there was no evidence of arrhythmias at the time the patient had the stroke and, despite the fact that there was no sign of peripheral venous disease, coagulation disorders, or atrial septal aneurysm, these conditions are not considered essential for the existence of a paradoxical embolism, even in young patients. Patent foramen ovale has been independently related to paradoxical embolism.^{2,3}

Right-to-left shunt facilitates paradoxical embolism.² In patients with cryptogenic stroke and patent foramen ovale, this shunt is detected by resting transesophageal echocardiogram in 8.2% of the cases. However, it is found in 15.3% when the echocardiogram is associated with the Valsalva maneuver.³ Thus, the failure to detect the shunt in a patient at rest does not imply that it is not always present during the cardiac cycle.

Although the Chiari network is found in 2% to 3% of the population and is associated with patent foramen ovale in 83% of the cases,² the incidence of paradoxical embolism is lower than expected and, thus, has been reported to act as a protective filter against pulmonary embolisms. However, Chiari network is more frequently detected on echocardiography performed in patients

who have experienced a cryptogenic stroke (4.6%) than in those undergoing echocardiography for some other reason (0.5%), a circumstance that would also relate Chiari network to the formation of atrial thrombi.²

The Chiari network is generally a fine, flat, fenestrated structure but, in this case, the morphology observed, its intimate contact with the patent foramen ovale, and its compact texture lead us to think that it facilitated the formation of the thrombus and its movement toward the patent foramen ovale.

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