Atrial Septal Aneurysm as a Cause of Cerebral Embolism in Young Patients

To the Editor:

The article by Belkin and associates,1 in which they reported a high prevalence of embolic events in a series of 36 consecutive patients with atrial septal aneurysm, has several additional important clinical implications besides those put forth by the authors. First, atrial septal aneurysm should always be considered among the cardiac causes of cerebral embolism that can be detected by echocardiography in young patients.2

Second, the consideration should be even more serious if the patient develops simultaneous embolic events in both the systemic and pulmonary circulation since bialtrial myxoma and paradoxical embolism are the only two other conditions that can cause bilateral cerebral embolization.

Third, the frequent association of paradoxical embolism with right-to-left atrial shunting with atrial septal aneurysm found by Belkin and associates3 results from their aggressive use of contrast echocardiographic studies. The sensitivity of contrast echocardiography in the diagnosis of paradoxical embolism, of course, might be further enhanced had they used it in conjunction with the Valsalva maneuver.4 As a matter of fact, when requesting echocardiography of a stroke patient in the evaluation for cardiogenic embolism, the referring physician should not only request the contrast study but also specify the application of the Valsalva maneuver.5

As a disadvantage, transcranial Doppler ultrasonography requires the patient to be cooperative, they are not employed in cases of cerebral embolism.6

The following is in reply:

To the Editor:

Dr. Cheng is certainly correct. We always employ the Valsalva maneuver when contrast echocardiographic studies are negative at rest.

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Does Transcranial Doppler Ultrasonography Provide Information About Cerebral Microcirculatory Flow?

To the Editor:

In his editorial, J.C. Grotta1 regrets that "easily administered bedside studies such as . . . transcranial Doppler do not provide information about microcirculatory flow". According to our experience with transcranial Doppler ultrasonography, this statement cannot be made unmodified. We use transcranial Doppler to detect changes of median artery flow velocity during breathholding tests or Valsalva maneuvers.1,2 These transcranial Doppler examinations can be performed as simple bedside tests. In patients with lacunar infarctions or white matter lucencies due to Binswanger's Disease, the expected changes of median cerebral artery blood flow velocity during breathholding tests or Valsalva maneuvers are usually diminished or absent (unpublished observations). Similar abnormalities of autonomic regulation are detectable by transcranial Doppler measurements in patients with longstanding arterial hypertension but without lacunar infarctions or white matter lucencies on computed tomography examinations. A study to describe the specificity and sensitivity of these transcranial Doppler tests in detecting cerebral microvascular disease is underway at our department.

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