Predisposing Factors in Cardiogenic Cerebral Embolism

To the Editor:

I read with interest the article by Yasaka and associates\(^1\) on the pathophysiology of intracardiac thrombus formation in patients with recurrent cerebral embolism. However, I was surprised that there were no cases found or mention made of either paradoxical embolism or atrial septal aneurysm as predisposing factors of recurrent embolization in cardiogenic cerebral embolism.

Although less common than other types of heart disease mentioned by the authors, paradoxical embolism has been increasingly recognized as one of the important cardiac sources of embolic stroke\(^2\) and is an important consideration because the diagnosis is often missed both clinically\(^3\) and also by cardiac catheterization\(^4\) or echocardiography.\(^5\) When requesting echocardiography of a stroke patient in an evaluation for cardiogenic embolism, the referring neurologist or internist should not only request contrast study but also specify the application of the Valsalva maneuver since routine echocardiography does not employ either of these two maneuvers.\(^6\)

On the other hand, atrial septal aneurysm, a diagnosis which should always be considered among the cardiac causes of cerebral embolism, especially in young patients,\(^7\)-\(^9\) can only be diagnosed and easily detected by echocardiography. It is one of the three conditions to be considered whenever a patient develops simultaneous embolic events in both the systemic and pulmonary circulation, the other two being bialtrial myxoma and paradoxical embolism.

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References

The following is in reply:

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We consider the provocative comments by Dr. Cheng on paradoxical embolism and atrial septal aneurysm as predisposing factors of recurrent embolization to be very important. However, we could not find any atrial septal aneurysms in our study population, even by intensive two-dimensional echocardiographic examinations of high quality. All 30 patients had heart disease that was considered to be a source of embolus. Further, there were no patients clinically diagnosed as having pulmonary embolism or deep vein thrombosis in the study population. We therefore did not perform additional examinations, such as contrast echo study, for paradoxical embolization.

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