Enhanced Thrombogenesis is Physiologic After Transcatheter Closure of Patent Foramen Ovale

To the Editor:

We read with interest the article by Bédard et al1 on the enhanced thrombogenesis associated with transcatheter closure of patent foramen ovale (PFO). Through an accurate and sophisticated analysis, the authors showed that transcatheter PFO closure is associated with an increased activation of the coagulation system with no change in platelet activation. The coagulation cascade seemed to be fairly activated as early as 1 week after the procedure and returned to normal values within 3 months from the procedure. The authors proposed that enhanced thrombin generation observed soon after the procedure is most likely related to the deposit of fibrin at the interface between blood and the device. Based on this assumption, the authors conclude that: (1) stroke recurrence might be related to device-induced thrombogenesis; and (2) anticoagulation should be preferred to antiplatelet drugs for the first 3 months after the procedure to reduce the risk of early stroke recurrence. However, despite an impressive increase in the pro-coagulant activity, the authors could not detect any thrombus on the device, and because of the sample size and follow-up length they could not report any recurrence of cerebral ischemia.1 Opposite to what might have been expected, the authors could not observe any relation between device size and amount of thrombin activation. A wider device surface would be expected to produce a higher thrombin generation, especially because it has been clinically associated with a higher prevalence of left-side disk thrombosis.2 Despite the elegant data presentation, we think that the impact of the coagulation after PFO closure might be clinically relevant, we encourage the authors to test their findings in a larger cohort of patients and assess whether an abnormal activation of the coagulation system could be associated with clinical end-points like postprocedural recurrence of cerebral ischemia or migraine, or at least thrombus formation on the device.

Disclosures

None.

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*Stroke*. 2007;38:e55; originally published online May 24, 2007;
doi: 10.1161/STROKEAHA.106.480715

*Stroke* is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
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Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://stroke.ahajournals.org/content/38/7/e55

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