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tive MS to be interrogated with short TE spectra and that more information is subsequently generated, which may ultimately provide a statistically significant finding.

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We read with great interest the article by Drs Ross and Buciuc[1] in which they reported their experience with using the Amplatzer vascular plug for parent artery occlusion to treat a large aneurysm of the cavernous internal carotid artery. We would like to raise an issue of possible concern, which was a central point of our recent publication on this topic.[2] Although we certainly agree with the authors that coil migration and distal coil embolization is a risk of parent vessel occlusion with use of detachable coils, we advocate that the current generation of the Amplatzer vascular plug be used as an adjunct to coil occlusion rather than as a stand-alone device. The Amplatzer plug used in both studies is porous, and is, accordingly, insufficient to seal flow through the vessel in a patient on anticoagulant and antiplatelet therapy.

Contrary to the current report, we saw persistent flow through the device in our patients treated with oral antiplatelet therapy and intravenous anticoagulation, even after waiting for more than 5 minutes and after deploying tandem vascular plugs. We raise this issue because the reduction of blood flow through the interstices of the device with incomplete occlusion can lead to distal embolization of thrombus as it is forming on the plug. Although this possibility may be less of a concern in the peripheral circulation for which the Amplatzer plug was designed, it is of paramount importance in the eloquent cerebral circulation.

Accordingly, our recommendation for the use of the Amplatzer plug was, and remains, as a mechanical anchor to prevent coil migration and ensure interruption of intraprocedural flow. It is hoped that the development of a variant of the Amplatzer plug covered with an impermeable membrane and mounted on a lower-profile delivery wire would make such a device ideally suited for single-step occlusion of even smaller-caliber and more delicate intracranial vessels.

References

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Reply:

We thank Drs Schirmer, Hoit, and Malek for their interest in our article. They are quite correct in pointing out that the Amplatzer vascular plug is porous, with an associated potential for downstream thromboembolic events during the interval between initial deployment of the plug and cessation of flow. However, the coils that they used in tandem with the vascular plugs in their reported cases[1] were also porous and presented a similar risk. Some practitioners advocate upstream temporary balloon occlusion during parent vessel occlusion with coils to prevent such occurrences. We have no data that suggest this is necessary, but the practice makes intuitive sense. When antiplatelet agents are present, it is likely that more plugs or coils will be necessary to occlude the vessel. We maintain, however, that for patients receiving full heparin dose, provided other hemostatic parameters are normal and there are no antiplatelet agents on board, 2 properly sized Amplatzer vascular plugs will safely occlude most internal carotid or vertebral arteries. Detachable balloons or a "covered" plug definitely represent a better solution, but neither is available in the United States right now.

Reference

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