Reply:

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AJNR Am J Neuroradiol published online 13 October 2016
http://www.ajnr.org/content/early/2016/10/13/ajnr.A4988.citation

Published October 13, 2016 as 10.3174/ajnr.A4988

REPLY:

We greatly appreciate the thoughtful comments of the authors who raise valuable points and expand our discussion on the topic of aneurysms associated with brain AVMs (bAVMs) in their letter. We agree with the authors that in almost all ruptured bAVMs where the hemorrhage can be safely attributed to a site within the nidus (and not a prenidal aneurysm), intranidal aneurysms represent, in fact, the site of rupture of the bAVM nidus and are frequently observed as "false" aneurysms, partially filled with thrombus. We strongly believe in the use of modern angiographic techniques, particularly superselective and 3D angiography, to delineate the architecture of the nidus and, most importantly, to understand the relationship of associated aneurysms in relation to the nidus, and therefore to guide further treatment, whether endovascular or surgical. When it has been determined that the site of hemorrhage is a prenidal aneurysm (and not the nidus itself, including an intranidal aneurysm), prompt endovascular or surgical treatment should be pursued, tailored to the angiographic features and location of the prenidal aneurysm and the clinical condition of the patient. Because the risk of early rehemorrhage is low (in the absence of venous outflow stenosis) in bAVMs determined to have ruptured within the nidus itself (including intranidal aneurysms), the merits of expedient endovascular or surgical treatment are not clear. Equally unclear to our knowledge remains the benefit of targeted or palliative treatment (surgical or endovascular) of only part of the nidus (which may harbor intranidal aneurysms) without the complete, definitive resection of the bAVM.

http://dx.doi.org/10.3174/ajnr.A4988

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