Reply:

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REPLY:

We thank Dr Corrêa and colleagues for their interest in providing feedback for our recent article, "Vessel Wall Enhancement in Unruptured Intracranial Aneurysms: An Indicator for Higher Risk of Rupture? High-Resolution MR Imaging and Correlated Histologic Findings."[1] We described our findings in MR vessel wall imaging in unruptured middle cerebral artery aneurysms and correlated histologic features and proposed a possible association among aneurysm wall enhancement attributable to inflammatory cell invasion, wall degeneration, and higher risk of rupture.

Dr Corrêa and colleagues pointed out that mural enhancement might not be associated with a higher risk of progression and rupture in endovascularly treated aneurysms.

We agree that wall enhancement in intracranial vessels is not necessarily pathologic or associated with a poorer prognosis. Endovascular treatment of aneurysms with coiling or flow diversion substantially alters hemodynamic, morphologic, and subsequently histologic conditions in the aneurysm wall and the adjacent segments of the parent vessel. Mural enhancement in these patients might still be of diagnostic value, but the lack of long-term follow-up data addressing this issue makes it difficult, for the time being, to assess its relevance.

Moreover, mural enhancement occurs in intracranial vessels in proximity to the dural penetration and is believed to be attributable to the presence of the vasa vasorum.[2] Therefore, the significance of wall enhancement in unruptured aneurysms located in these vessel segments (eg, paraophthalmic internal carotid artery, posterior inferior cerebellar artery origin) ought to be critically and separately investigated.

Furthermore, among intracranial aneurysms, various entities have been described that possibly differ in pathogenesis, morphologic features, progression rate, and clinical course.[3-5] In our opinion, further investigation of distinct MR vessel wall imaging features in saccular-versus-fusiform, sidewall-versus-bifurcation, and small-versus-large aneurysms is in order.

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