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Reply:

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REPLY:

We thank Drs Paruthi, Gupta, and Khandelwal for drawing our attention to the issue of the rare embryologic variations one can encounter performing intra-arterial chemotherapy. Indeed, they can represent challenging scenarios for the neurovascular interventionalist. In our series of eyes treated for intraocular retinoblastoma, we did not face rare variants such as those encountered by Paruthi et al and, therefore, did not discuss the subject. Nevertheless, we believe that the case reported by Paruthi et al illustrating a combination of very unfortunate events (a too-angulated ophthalmic artery stemming and a type 1 persistent trigeminal artery) strengthens the concept that the neurovascular interventionalist must be prepared to adapt the technical approach on the basis of the circumstances.[1]

Anatomic and hemodynamic variations may require the exploration of several possible alternative pathways of intra-arterial drug delivery from the external carotid artery (ECA)[2] or the use of the balloon technique occluding the ICA or the ECA.[3,4] In the specific case addressed by Paruthi et al, we agree that the disappearance of the ophthalmic artery (OA) after ICA occlusion was due to hemodynamic alterations of the blood flow, but we suggest a different interpretation of such changes. In our opinion, the missing OA opacification could likely be the result of a reversal of flow in the OA related to the occlusion of the ICA rather than to the preferential retrograde flow to the posterior circulation through the primitive trigeminal artery. Thus, we believe that the authors would have to verify with the microcatheter the possible reformation of the OA by branches of the ECA during occlusion of the ICA before giving up on the procedure. On the other hand, we agree with Paruthi et al that the use of 2 balloons in a single artery of an infant would have been an unsafe procedure.

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