Occlusive retinal vasculitis following intravitreal brolucizumab for exudative age-related macular degeneration

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Purpose:
To summarize cases of retinal vasculitis reported to the American Society of Retina Specialists (ASRS) following FDA approval of brolucizumab for treatment of exudative age-related macular degeneration.

Methods:
The ASRS Research and Safety in Therapeutics (ReST) Committee collected and analyzed clinical and imaging characteristics from submitted reports of retinal vasculitis after intravitreal brolucizumab.

Results:
Data from 25 eyes of 24 patients with retinal vasculitis after brolucizumab were collected. Images were collected from 23 of 25 eyes. 88% of patients were female. All events arose after 1 (44%), 2 (44%) or 3 (12%) injections. Most (92%) cases were associated with inflammation, and mean time to presentation was 26 days (median 28 days, range 3-63 days) from the most recent brolucizumab injection. Mean pre-event vision was 20/52; at symptom onset was 20/147; and at last follow up was 20/226 (range 20/30-LP). Some eyes were asymptomatic, likely due to mild and/or peripheral involvement. Analysis of submitted images identified a spectrum of vasculopathy ranging from minimal to severe. Broad involvement of vessels was identified, including both retinal arterial and venous vessels and choroidal vessels, along with optic nerve leakage. Arterial vessels were most commonly affected. Image analysis identified occlusive disease in 83% of eyes (consistent with 84% reported by the providers). Treatment approaches were varied, and no trends were identifiable that could predict greater success with any specific approach.

Conclusions:
Although the exact mechanism of these findings remains unclear, the ReST committee recommends a careful evaluation of the anterior and posterior segment for any signs of active inflammation prior to brolucizumab injection. Fluorescein angiography (widefield or with peripheral sweeps, as available) assists in visualizing the spectrum of vasculopathy. Given choroidal involvement in many cases, ICG-angiography may prove to be of benefit, although its role is currently unclear. Although optimal treatment strategies remain unknown, aggressive steroids may be important to target inflammation. Re-challenge with anti-VEGF agents should occur only after inflammation has resolved completely.