9:26 AM

Intravitreal High-Dose (2 mg) Ranibizumab for Recalcitrant Radiation Maculopathy

- Paul T. Finger, MD, FACS

OBJECTIVE To present findings from high-dose 2.0 mg ranibizumab treatment in patients with radiation maculopathy that failed low dose anti-VEGF therapy.

PURPOSE To report our interim results of intravitreal high-dose (2.0 mg) ranibizumab for radiation maculopathy (RM) in patients with recalcitrant disease despite periodic continuous treatment with commercially available anti-VEGF therapy.

METHODS 10 patients enrolled in a prospective pilot study. Patients developed RM subsequent to plaque brachytherapy for uveal melanoma(n=8) or external beam radiation therapy(n=2). Entry criteria also included a history of commercially available intravitreal anti-VEGF therapy. Patients were assigned in an alternating manner to either:1) 4 initial monthly injections followed by monthly injections per study criteria or 2) monthly injections per study criteria. Intravitreal ranibizumab was given every 30 days(+/-7 days). Outcome measures included safety and tolerability and treatment

effect as measured by visual acuity, ophthalmoscopy, photography, angiography and optical coherence tomography.

RESULTS There were 7 females and 3 males, with a mean age of 55 years (range 31-87). At the time of this report, there has been a mean 9 monthly injections (range 7-12). The 6-month interim results reveal: 9 patients had stable (n=3) or improved (n=6) visual acuity with a mean improvement of +2.5 letters (range 0-8). Central foveal OCT thickness was stable or improved in 80% of patients, with a mean thickness reduction of -19% (range +14 to -50%). There were no significant adverse ocular or systemic side effects at this interval. There was no difference in the number of injections for the 2 groups. Based on clinical exam, no patient has been able to extend treatment beyond the monthly injection protocol.

CONCLUSION Intravitreal high dose ranibizumab for RM was well-tolerated for up to 12 months. In this subset, high dose ranibizumab further reduced retinal edema and improved acuity. This suggests that the VEGF level may be higher than can be managed by currently available anti-VEGF therapies. It also suggests a potential role for a higher dose of ranibizumab.

TAKE HOME MESSAGE Higher concentrations of anti-VEGF 2.0 mg ranibizumab (Lucentis) controlled recalcitrant radiation maculopathy in select patients.

9:34 AM

Outcomes After Plaque With Vitrectomy and Silicone Oil for Choroidal Melanoma

- Tara A. McCannel, MD, PhD
- Colin A. McCannel, MD

OBJECTIVE To report on the surgical and visual outcomes of the use of silicone oil 1000 centistokes as a radiation attenuating agent in the treatment of choroidal melanoma.

PURPOSE We have previously reported on the iodine-125 attenuating effect of silicone oil 1000 centistokes (Oliver et al, 2010). The purpose of this paper is to report on the initial clinical experience with iodine-125 brachytherapy in combination with vitrectomy and silicone oil 1000 centistokes for the treatment of choroidal melanoma.

METHODS All patients with choroidal melanoma who underwent iodine-125 brachytherapy in combination with vitrectomy and silicone oil 1000 centistokes with at least one-year of clinical follow-up were included. Prospective visual function including visual acuity, contrast sensitivity and color vision were assessed. Surgical outcomes including tumor response to radiation and retinal complications were determined. Radiation related complications were also identified.

RESULTS 13 patients were included. All had a minimum of 12 months clinical follow-up, 3 patients had two years follow-up. All patients had good tumor response to radiation, there was no case of local treatment failure, and one patient developed metastasis. Surgical complications included intraoperative retinal tears in 2 patients, symptomatic retained silicone oil in 1 patient, and macular hole in 1 patient. At last follow-up, visual acuity was the same or better than baseline in 7/13 (54%). Of the 6 with worse vision compared to baseline at last follow-up, 2 had untreated cataract, 2 had extensive tumor exudation, 1 had had macular hole repair, and 1 patient had a large treated tumor. Evidence of radiation maculopathy was present in 2 patients who maintained baseline vision.

CONCLUSION Iodine-125 brachytherapy in combination with vitrectomy and silicone oil 1000 centistokes is a feasible surgical procedure. With at least one year of follow-up, baseline vision was maintained in the majority of this cohort. Tumor exudation and radiation maculopathy were observed. Continued long-term clinical follow-up is warranted.

TAKE HOME MESSAGE Silicone oil 1000 cs may be useful as a radiation attenuating agent in the treatment of choroidal melanoma with plaque brachytherapy.