Long Term Outcomes of Anti-VEGF Therapy for Choroidal Neovascularization Associated with Choroidal Osteoma

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Purpose
To investigate the efficacy of serial anti-VEGF injection treatment for choroidal neovascularization (CNV) associated with choroidal osteoma.

Background
Choroidal osteoma is a rare, benign tumor that typically affects young women.
First described by Gass in 1978, the tumor is typically a yellow-white juxtapapillary lesion.
On histopathology, the tumor has mature bone in the affected choroid.
Tumor growth and vision loss are common. At 10 years, tumor growth is observed in 51% of patients, vision is <20/200 in 56%, and 31% have a CNVM.

• CNV is a important cause of vision loss in these patients. Prior reports have described treatment with anti-VEGF agents, but they are small in number or limited in follow-up.

Methods
IRB approved retrospective study of all patients with choroidal osteoma treated with bevacizumab and/or ranibizumab for CNV.
Primary outcomes measured: resolution of intraretinal, subretinal, or sub-RPE fluid on OCT (Figure 1) and change in visual acuity from baseline.

Results
• Baseline characteristics, tumor characteristics, and results are depicted in Tables 1, 2, and 3, respectively, above.
• A median of 8 intravitreal anti-VEGF injections were given. In addition, 4 patients (50%) received supplemental photodynamic therapy (PDT).
• Patients were followed for a mean 32.5 months.
• At final follow-up, exudation was controlled in 7 of 8 patients (87%). On average, patients gained 1 line of Snellen acuity.
• 4 patients (50%) experienced at least 1 recurrence of exudation during their clinical course, occurring at a mean 11 months after the most recent anti-VEGF treatment.

• Of the 4 patients (50%) who received PDT in addition to anti-VEGF therapy, only one (25%) experienced a recurrence of exudation.

Conclusions
Therapy with intravitreal bevacizumab and/or ranibizumab can be a long term, effective treatment for CNV associated with choroidal osteoma, with control of exudation and preservation of visual acuity.
Continued monitoring is essential. Recurrent leakage is common and may occur months after initial control.
PDT, which results in tumor decalcification, may reduce the risk of exudative recurrence.
In extrafoveal tumors, PDT should be considered early. For subfoveal tumors, anti-VEGF treatment may be the only available treatment option (Figure 2).

References

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