Abstract 90

CLINICAL FEATURES OF CHOROIDAL OSTEOMA

Gorziglia A.*, Bofill A., Juan Ignacio V., Perez E., Simonetti C., Eduardo U., Sergio Z.

Fundación Oftalmológica Los Andes ~ Santiago ~ Chile

Choroidal osteoma (CO) is a rare benign intraocular tumor whose exact prevalence is unknown. In most cases, CO is a unilateral condition. Patients with CO are generally asymptomatic, with preserved visual acuity. Symptoms arise in cases of secondary complications, including retinal pigment epithelium atrophy, tumor growth, subretinal fluid accumulation, and choroidal neovascular membrane (CNVM) formation. The diagnosis of CO is primarily clinical, supported by imaging tests. Currently, there is no standard treatment for CO, and existing therapies are aimed to manage complications. This study aims to describe the clinical characteristics, factors associated with CNVM presence, and treatment of patients with CO.

A retrospective review of electronic medical records and imaging studies was conducted between January 2010 and March 2025 in 13 patients diagnosed with choroidal osteoma. A multimodal retinal imaging approach was used, including diagnostic confirmation with ultrasound and optical coherence tomography.

A total of 13 patients were identified, with a mean age at CO diagnosis of 34 years (range: 15–69 years). There was a notable female predominance (female-to-male ratio: 5.5:1). Bilateral cases were found in 2 patients (15%), and the tumor was always monofocal. Macular involvement was observed in 11 eyes (73.3%). Diagnostic confirmation was performed with ultrasound or computed tomography in 12 patients. Subretinal fluid was present in 11 eyes, of which 7 (46.7%) had choroidal neovascularization. Significant retinal pigment epithelium atrophy was observed in 5 eyes (33.3%). No cases of tumor growth were noted during follow-up.
Patients who developed CNVM received treatment. The treatment administered included intravitreal bevacizumab in 6 eyes and intravitreal aflibercept in 1 eye. Among the eyes treated with bevacizumab, 5 (83.3%) showed subsequent inactivation. The eye treated with Affiblercept also had inactivation of CNVM. On average, six injections per eye were performed (range: 1–13). The median LogMAR visual acuity of patients with CO without CNVM was 0.26 (range: 0–1.30). Among patients who developed CNVM, the median initial LogMAR visual acuity was 0.97 (range: 0.26–2.00). After treatment, the median LogMAR visual acuity was 1.30 (range: 0.19–2.00).

CO is a rare disease that typically affects young women, and it is generally unilateral. Physicians should be aware of the clinical manifestations of CO to properly manage its complications, primarily CNVM. Intravitreal anti-angiogenic injections are effective for CNVM inactivation but do not appear to improve visual outcomes. Due to the low prevalence of this condition, further studies are needed to validate our findings and evaluate new techniques for treatment, monitoring, and follow-up of these patients.

1. Furino C, Di Antonio L, Grassi MO, Rispoli M, Reibaldi M, Niro A, et al.
Choroidal neovascularization due to choroidal osteoma treated with antivascular endothelial growth factor therapy: An optical coherence tomography angiography study. Eur J Ophthalmol. 2018;29(3):323-9.
2. Zhang L, Ran QB, Lei CY, Zhang MX. Clinical features and therapeutic

management of choroidal osteoma: A systematic review. Surv Ophthalmol. 2023;68(6):1084-92.
3. Alameddine RM, Mansour AM, Kahtani E. Review of choroidal osteomas. Middle East Afr J Ophthalmol. 2014;21(3):244-50.
4. Gass JD, Guerry RK, Jack RL, Shields JA. Choroidal osteoma. Arch Ophthalmol. 1978;96:428-35.
5. Shields CL, Sun H, Demirci H, Shields JA. Factors predictive of tumor growth, tumor decalcification, choroidal neovascularization, and visual outcome in 74 eyes with choroidal osteoma. Arch Ophthalmol. 2005;123:1658-66.
6. Foster BS, Fernandez-Suntay JP, Dryja TP, Shields JA. Clinicopathologic reports, case reports, and small case series: surgical removal and histopathologic findings of a subfoveal neovascular membrane associated with choroidal osteoma. Arch Ophthalmol. 2003;121:273-6.
7. Navajas EV, Costa RA, Calucci D, Rishi P. Multimodal fundus imaging in choroidal osteoma. Am J Ophthalmol. 2012;153:890-5.
8. Pellegrini M, Invernizzi A, Giani A. Enhanced depth imaging optical coherence tomography features of choroidal osteoma. Retina. 2014;34(5):958-63.
9. Azad SV, Takkar B, Venkatesh P. Swept source: optical coherence tomography angiography features of choroidal osteoma with choroidal neovascular membrane. BMJ Case Rep. 2016;2016:bcr2016215899.
10. Sagar P, Shanmugam M, Ramanjulu R. OCT angiography char