CHOROIDAL ‘GHOST’ NEVUS

Imaging can make all the difference in a diagnosis.

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Choroidal nevi frequently masquerade as choroidal melanomas. In a study of 12,000 patients referred for presumed choroidal melanoma, 1,739 (14%) were found to have pseudomelanomas, with the greatest proportion of the pseudomelanomas being choroidal nevi (851/1,739, 49%).¹ It is rare for other conditions to simulate a choroidal nevus. In the same series, other pseudomelanomas were attributed to peripheral exudative hemorrhagic chorioretinopathy (139/1,739, 8%), congenital hypertrophy of retinal pigment epithelium (108/1,739, 6%), hemorrhagic detached retinal or pigment epithelium (86/1,739, 5%), circumscribed choroidal hemangioma (79/1,739, 5%), and age-related macular degeneration (76/1,739, 4%), with the remaining pseudomelanomas attributed to various other conditions, each comprising less than 2% of diagnoses.

Below, we report a case of posterior vitreous detachment (PVD) simulating a choroidal nevus.

CASE REPORT

A 75-year-old asymptomatic African American woman was referred for evaluation of a choroidal nevus in the right eye. Her visual acuity was 20/30, and slit-lamp biomicroscopic funduscopy revealed a grey lesion nasal to the optic disc measuring 2 mm in diameter (Figure, A). Enhanced depth imaging optical coherence tomography (EDI-OCT) showed that there was no choroidal mass. In fact, a PVD with a dense posterior hyaloid opacity causing retinal shadowing that simulated a choroidal nevus was noted.

Symptomatic retinal shadows (floaters) are most commonly associated with acute or chronic PVD.² The EDI-OCT showed a full thickness, low reflectivity shadow defect in the retina caused by the posterior hyaloid opacity. It appeared similar to diabetic macular edema, which shows a low frequency shadow posterior to the hard exudate on OCT; however, the differentiating feature is that the lucent shadow created by the hard exudate is seen only in the posterior retina, not the full thickness.³

Our diagnosis was PVD shadow inducing ghost-like nevus. We recommended observation and biannual examination. On follow-up examination 2 years later (Figure, B), the PVD was slightly relocated with shadow on repeat EDI-OCT testing simulating a choroidal nevus, further verifying the initial diagnosis.

DISCUSSION

PVD is classified into five stages: stage 0 indicates no PVD, stages 1 through 3 indicate incomplete PVD, and stage 4 indicates complete PVD.⁴ Stages 1, 2, and 3 (partial PVD) are generally visible on OCT. In stage 4 (complete PVD, the posterior hyaloid membrane is too far in front of the internal limiting membrane to be detected on OCT testing; therefore, the diagnosis is made by slit-lamp biomicroscopy with or without B-scan ultrasonography.⁴

Prior to the widespread use of OCT in the late 1990s, it was difficult to establish an accurate diagnosis of uveal tumors. Ferry et al evaluated 529 eyes with clear media and visible lesion of the 7,877 enucleated eyes that had been preoperatively diagnosed as having a uveal melanoma, of which 19% (n = 100 eyes) were histopathologically proven to have at least one simulating lesion (n = 102 lesions), including retinal detachment (35/102, 34%), ciliary body and choroidal tumors (12/102, 12%), and/or choroidal nevi (4/102, 4%), with the...
remaining pseudomelanomas attributed to various other conditions (each comprising less than 9% of diagnoses). In another report by Shields et al, 20% (n = 41 eyes) of 208 enucleated eyes with clear media and visible lesions that were preoperatively diagnosed as having a uveal melanoma were found to have at least one simulating lesion (n = 44 lesions), including retinal detachment (19/44, 43%), and/or ciliary body or choroidal tumors (7/44, 16%), with the remaining pseudomelanomas attributed to various other conditions (each comprising less than 9% of diagnoses). Choroidal nevi did not simulate melanoma in either study.

CONCLUSION
This case demonstrates the importance of EDI-OCT in the evaluation of choroidal nevus. This patient was referred for a possible choroidal nevus, and fundus photography suggested a small choroidal nevus. EDI-OCT, however, found only a PVD and no choroidal mass. Hence, EDI-OCT confirmed a “ghost” nevus that proved to be only PVD.