Case Description
A 53-year-old asymptomatic white man was referred for evaluation of a pigmented fundus lesion in his left eye (OS) discovered during routine examination. On initial presentation, visual acuity was 20/20 in each eye. Slit-lamp examination and intraocular pressures were within normal limits in both eyes. Dilated fundus examination of the right eye was unremarkable. The left eye disclosed a pigmented choroidal lesion inferior to the optic disc and measuring 3.5 x 3.5 mm in basal dimensions and 1 mm in ultrasonographic thickness. Soft drusen were present over the lesion. The mass was acoustically solid on B-scan ultrasonography. Orange pigment, subretinal fluid, and RPE alterations were absent. The clinical findings were consistent with choroidal nevus, and observation was recommended.

Discussion
RPED is a somewhat uncommon and under-reported finding associated with choroidal nevus. In the population-based Blue Mountain Eye Study, choroidal nevi were found in 6.5% of the 3,654 patients (age 49 to 97 years), but RPED was not described as an associated feature. In clinic-based reports on 3,422 and 120 eyes with choroidal nevi monitored at Wills Eye Institute, RPED was detected in 1.2% of cases clinically and in 12% of cases by OCT. In a separate analysis, RPED was not a risk factor for growth or transformation of nevus to malignant melanoma but was found to be a predictor of poor visual outcome, particularly for subfoveal nevi. After 3 years of stable follow-up, the mass increased slightly in thickness ultrasonographically. Clinically, a transparent overlying RPED had formed, evident on autofluorescence, and more clearly visible on fluorescein angiography as mottled, well-demarcated hyperfluorescence with late pooling, and on optical coherence tomography (OCT) as an abrupt dome-shaped elevation at the level of the RPE (Figure 1). There was no hemorrhage, exudation, subretinal fluid, or sign of choroidal neovascularization. Observation was advised, and the RPED remained stable over a period of 9 years with visual acuity remaining 20/20 in both eyes.

RPE Detachment
Overlying Choroidal Nevus Imparting Pseudo-growth Appearance

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nevi, RPED, particularly in the fovea, carried a relative risk of 22.2 for loss of 3 or more logMAR lines of vision and a relative risk of 12.8 for final visual acuity of less than 20/200. Often undiagnosed by clinical exam alone, RPED can be better detected with OCT, allowing confirmation of the diagnosis and better prognostic information for visual outcome.

Histopathologically, the RPE is juxtaposed between the outer segment of the photoreceptor layer and Bruch membrane. Its functions include formation of the outer blood-retinal barrier, phagocytosis of photoreceptor outer segments, retinol metabolism, and transport of nutrients and metabolic end products of the retina, all of which help to maintain the integrity of the retina. An RPED overlying a choroidal nevus likely occurs secondary to degenerative changes in Bruch membrane. With time, there is an increased amount of lipid and waste products deposited in Bruch membrane leading to hydrophobic barrier formation and the accumulation of sub-RPE fluid.

RPED are classified etiologically (inflammatory, ischemic, idiopathic, and degenerative) or clinically (serous, drusenoid, and fibrovascular). Our case demonstrates a serous RPED, described as a smooth, sharply demarcated, dome-shaped RPE elevation that contains predominantly serous fluid. This can best be visualized as an abrupt, clear elevation on OCT and also demonstrated on fluorescein angiography with early hyperfluorescence and well-circumscribed late pooling. Autofluorescence demonstrates moderate localized hyperautofluorescence that is particularly bright at the margins of the RPED. An analysis of autofluorescence of choroidal nevi in 64 patients revealed RPED hyperautofluorescence when the detachments appeared fresh and hypoauflorescence in RPED with chronicity.

While RPEDs overlying choroidal nevi often contain serous fluid alone, investigation for choroidal neovascular membrane (CNVM) should be made, as this finding can adversely affect visual prognosis. Diagnostic clues indicating presence of CNVM in RPED include associated serous retinal detachment, presence of exudation and/or blood, and chorioretinal folds. Fluorescein angiography, indocyanine green angiography, and OCT can help visualize occult CNVM within RPED.

Treatment of CNVM secondary to choroidal nevus varies. Levy and associates reported a case of a 52-year-old man with a fibrovascular RPED extending into the fovea secondary to a choroidal nevus, which was treated successfully with two sessions of photodynamic therapy with improvement of visual acuity from 20/120 to 20/40. Other treatment modalities include laser photocoagulation, transpupillary thermotherapy, and vascular endothelial growth factor inhibitors.

**SUMMARY**

In summary, RPED overlying choroidal nevus is a somewhat uncommon clinical finding that can be confirmed with ancillary testing. This is important because an overlying RPED can pseudo-enlarge a choroidal nevus, causing suspicion for transformation into melanoma. RPED is not associated with malignant transformation, but on the contrary implies stability and chronicity of the nevus. RPED overlying a subfoveal nevus is a long-term risk for visual loss; therefore, careful clinical examination and
appropriate diagnostic procedures should be implemented for all patients with choroidal nevi.

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