Vitelliform Retinopathy in Metastatic Cutaneous Melanoma With Choroidal Involvement

Vitelliform retinopathy has been reported in patients with metastatic melanoma. Without clinical evidence of choroidal involvement, it has been speculated to be of paraneoplastic origin. We describe vitelliform lesions in a patient with metastatic cutaneous melanoma with histopathologic evidence of choroidal metastasis.

Report of a Case. A 73-year-old man was referred for nyctalopia in January 1994. He denied having photopsias. His medical history was significant for metastatic cutaneous melanoma that was in remission. His best-corrected visual acuity was 20/30 OU. Slitlamp examination results were unremarkable. Funduscopic examination showed multiple neurosensory and retinal pigment epithelial (RPE) detachments of varying size (500-5000 µm) in both eyes (Figure 1). There were layered fluid-lipid interfaces inferiorly in the larger RPE detachments. Fluorescein angiography demonstrated bilateral areas of blocked fluorescence secondary to the fundus lesions, and there was early leakage into the overlying RPE detachment. Echographic examination did not reveal choroidal infiltration.

Results of a systemic metastatic workup were negative; however, 16 months later, a magnetic resonance image of the head revealed metastatic lesions involving the parietal lobe. During the next 18 months, his visual acuity remained stable and the neurosensory and RPE detachments resolved. Two years after his initial examination, his visual acuity had deteriorated to 20/70 OU with the presence of atrophy of the RPE and pigmentary changes involving the RPE in the fovea.

Despite chemotherapy and radiation, the patient died of metastatic cutaneous melanoma 3 years after the initial diagnosis. His right eye was enucleated after death and was submitted for pathologic examination. Histologically, there was a flat, pigmented, cellular infiltrate within the choroid located just posterior to the equator. The infiltrate was composed of a dense population of spindle-shaped and epithelioid cells with pale cytoplasm and marked nuclear and cellular pleomorphism. Rare mitotic figures were seen in the mass. Large blood vessels coursed throughout the tumor. These findings were consistent with metastatic melanoma involving the choroid. In addition, multiple, small RPE detachments were overlying the tumor (Figure 2).

Comment. Melanoma-associated retinopathy (MAR) is a rare paraneoplastic condition in patients with metastatic melanoma associated with nyctalopia, visual photopsias, abnormal electroretinographic findings, and antiretinal antibodies. Funduscopy findings in MAR are typically normal, although recently many retinal findings including vitelliform lesions have been described. The etiology of this vitelliform retinopathy is unknown. Optical coherence tomography of these lesions suggests that they are at the level of the outer retina and RPE without choroidal involvement. Because there is no clinical evidence of choroidal involvement, the vitelliform retinopathy is speculated to be paraneoplastic in origin and a variant of MAR.

To our knowledge, this is the first histologic report of vitelliform retinopathy in metastatic cutaneous melanoma. Although there was no clinical evidence of choroidal metastasis (fundus examination, fluorescein angiography, ultrasonography), the histopathologic findings confirm choroidal infiltration. Clinically, the patient had nyctalopia, which would be consistent with MAR, but ele-
troretinography and antiretinal antibody testing were not performed. Previous cases of vitelliform retinopathy have had some clinical findings consistent with MAR,1,2,4,6 while others have not.4,5 None of these reports had clinical evidence of choroidal involvement. The vitelliform lesions have been postulated to represent a new paraneoplastic clinical manifestation. The pathologic results in this case argue against a paraneoplastic entity but may suggest a local metastatic cause with subclinical choroidal involvement. Another explanation is that choroidal involvement occurred after the vitelliform lesions with the dissemination of the metastatic melanoma. Further studies are needed to determine the etiology of these vitelliform lesions in metastatic melanoma.

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Cutaneous Halo Nevi Following Plaque Radiotherapy for Uveal Melanoma

Halo nevi have been described in both dermatology and ophthalmology.1,2 Cutaneous halo nevi are found more often in children than adults and are believed to result from an immune response.3 Choroidal halo nevus represents 5% of all choroidal nevi and displays low risk for transformation to melanoma.4 The development of cutaneous halo nevi or vitiligo in adulthood can occur following treatment of cutaneous melanoma and correlates with decreased morbidity, presumably due to activation of a systemic immune response.5 There have been rare reports of vitiligo and/or cutaneous halo nevi development following enucleation for uveal melanoma.6,7 A comprehensive study on choroidal halo nevi found a statistical association with history of skin melanoma.2 Herein, we describe a young woman with uveal melanoma who developed a halo ring around numerous pigmented cutaneous nevi following plaque radiotherapy for uveal melanoma.

Report of a Case. A 28-year-old woman with photopsia in the left eye was diagnosed as having choroidal mela-