Sir,

Paraneoplastic vitelliform retinopathy associated with metastatic choroidal melanoma

Vitelliform retinopathy in patients with metastatic melanoma is very rare. Only three cases associated with choroidal melanoma,[1–3] five cases with cutaneous melanoma,[3–5] and one case with metastatic melanoma of an unknown primary site[2] have been reported yet. Here we describe a patient with metastatic choroidal melanoma and paraneoplastic vitelliform fundus findings.

Case report

A 62-year-old woman presented in July 2005 with gradual loss of vision in her left eye. She had no complaints of photopsias or night blindness but reported variable glare. Her medical history was significant for choroidal melanoma in the right eye that was treated by enucleation in 2003. On examination, best-corrected visual acuity was 20/40 in the left eye. Slit-lamp examination was unremarkable. Ophthalmoscopy showed multiple yellowish areas of serous retinal detachment along the temporal arcades (Figure 1). Fluorescein angiography showed some blocked fluorescence corresponding to the yellowish lesions in the left eye. Optical coherence tomography (OCT) showed a serous pigment epithelial detachment (PED) with thickening of the pigment epithelial layer. Ultrasonography, perimetry, electroretinography (ERG), and electrooculography (EOG) were unremarkable. Antiretinal antibodies, including antirecoverin and antienolase could not be demonstrated using western blot technique and immunohistochemistry.

Systemic work-up including computed tomography (CT) scanning detected the presence of liver and lung masses. The patient did not receive any treatment.

During 20 months of follow-up, the fundus lesions had altered in configuration. Visual acuity decreased to 20/50. ERG examinations remained unremarkable.

The patient died in May 2007.

Comment

The vitelliform retinopathy described in this patient resembles those in the nine cases of metastatic melanoma described in previous works.[1–5] In four cases, both antiretinal antibodies and ERG abnormalities were found.[1,3–5] In one case, antiretinal antibodies were detected; however, ERG was not performed.[4] In the other four cases, neither antibodies nor ERG were tested.[2,3]

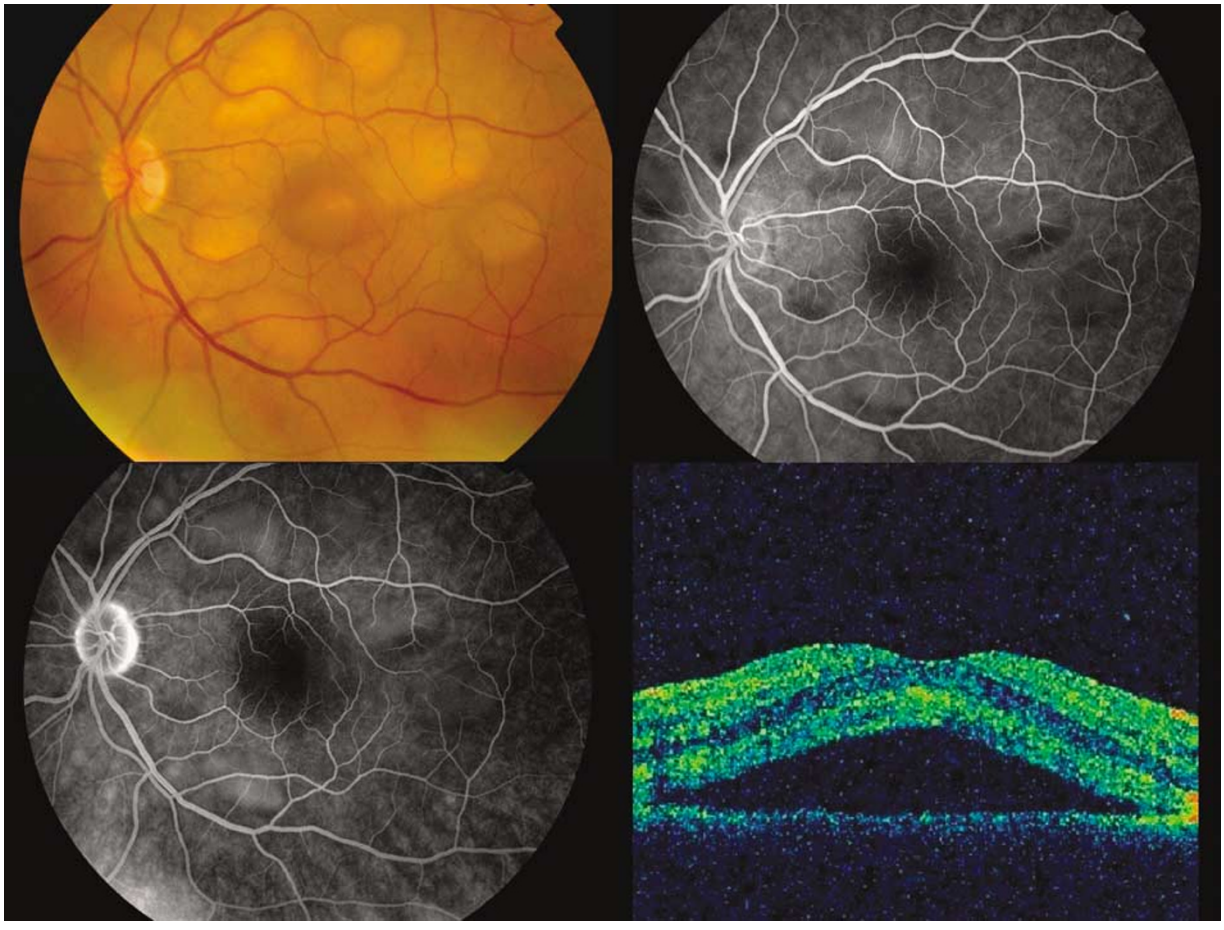

Figure 1 Upper left: colour fundus photograph depicting yellow subretinal exudates. Upper right: early-phase FA; lower-left: late-phase FA, shows subtle blocking of fluorescence corresponding to the yellowish lesions. Lower right: OCT showing PED with no intraretinal or subretinal fluid.

ERG abnormalities together with antiretinal antibodies suggest a paraneoplastic origin like melanoma-associated retinopathy (MAR). In our patient with no antiretinal antibodies and a normal ERG, MAR syndrome is unlikely.[6]

The vitelliform lesions of our patient may resemble other disorders with vitelliform lesions like acute exudative polymorphous vitelliform maculopathy[7] (AEPVM) or adult vitelliform macular dystrophy[8] (AVMD). Both diseases show normal ERG and no antiretinal antibodies. However in contrast to our case, AVMD patients show a solitary subretinal lesion in the fovea. AEPVM consists of bilateral vitelliform lesions and visual loss, which resolve within several months, accompanied by subnormal ERG and EOG. Neither one has associations with ocular or systemic malignities.

Fundus configuration as well as the course of the mentioned diseases are quite different from that of our patient.

Although our patient had a normal ERG and no antiretinal antibodies, the association of vitelliform lesions with metastatic choroidal melanoma suggests a paraneoplastic origin.

The pathogenesis of paraneoplastic retinopathy is poorly understood. Further studies are required for a better understanding of the aetiology.

References

1 Zacks DN, Pinnolis MK, Berson EL, Gragoudas ES. Melanoma-associated retinopathy and recurrent exudative retinal detachments in a patient with choroidal melanoma. *Am J Ophthalmol* 2001; **132**: 578–581.
2 Jampol LM, Kim HH, Bryar PJ, Shankle JB, Lee RT, Johnston RL. Multiple serous detachments and subretinal deposits as the presenting signs of metastatic melanoma. *Retina* 2004; **24**: 320–322.
3 Sotodeh M, Paridaens D, Keunen J, Van Schooneveld M, Adamus G, Baarsma S. Paraneoplastic vitelliform retinopathy associated with cutaneous or uveal melanoma and metastases. *Klin Monatsbl Augenheilkd* 2005; **222**: 910–914.
4 Borkowski LM, Grover S, Fischman GA, Jampol LM. Retinal findings in melanoma-associated retinopathy. *Am J Ophthalmol* 2001; **132**: 273–275.
5 Palmowski AM, Haus AH, Pfohler C, Reinhold U, Algayer R, Tilgen W *et al*. Bilateral multifocal chorioretinopathy in a woman with cutaneous malignant melanoma. *Arch Ophthalmol* 2002; **120**: 1756–1761.
6 Pföhler C, Haus A, Palmowski A, Ugurel S, Ruprecht KW, Thirkill CE. Melanoma-associated retinopathy: high frequency of subclinical findings in patients with melanoma. *Br J Dermatol* 2003; **149**: 74–78.
7 Chan CK, Gass DM, Lin SG. Acute exudative polymorphous vitelliform maculopathy syndrome. *Retina* 2003; **23**: 453–462.
8 Renner AB, Tillack H, Kraus H, Kohl S, Wissinger B, Mohr N *et al*. Morphology and functional characteristics in adult vitelliform macular dystrophy. *Retina* 2004; **24**: 929–939.

TJP Nieuwendijk and JMM Hooymans

Department of Ophthalmology, University Medical Center Groningen (UMCG), Groningen, The Netherlands
E-mail: j.m.m.hooymans@ohk.umcg.nl

Proprietary interest/research funding: none
Part of this work was presented at the annual meeting of the Dutch Society of Ophthalmology, 2006 and as a poster at the Meeting of Club Jules Gonin, 2006, Capetown, South Africa

Eye (2007) **21,** 1436–1437; doi:10.1038/sj.eye.6702949; published online 10 August 2007

Sir,

Peripheral corneal ulceration as a complication of silicon punctal plug: a case report

Punctal plugs (PP) insertion is an effective and reversible method to treat dry eye syndrome (DES) and some other ocular surface diseases. Non-absorbable plugs made of silicon are the most commonly used types and are relatively safe with minimal complications.[1] We report a case of corneal ulcer secondarily to localized irritation from a fragmented cap of silicon PP in a patient with DES.

Case report

A 55-year-old man is presented to emergency eye clinic with a watery, sore, and red left eye. He gave a history of having silicone PPs inserted into both eyes 5 years earlier. Examination showed a peripheral corneal ulcer, 2×1 mm in size at 8 O'clock, separated from the limbus by a zone of clear cornea in his left eye. A provisional diagnosis of marginal keratitis was made and treatment with topical antibiotic and steroid combination was initiated. After 2 weeks with an interim follow-up visit, the patient reported little improvement in his symptoms and was still found to have active corneal ulceration. Slit-lamp examination revealed that on adducting his left eye, the ulcerated corneal margin comes into direct contact with the cap of the lower lid PP (Figure 1a–d). The cap was seen partially broken and hence was removed. Complete resolution of the ulcer was observed a week later.

Comment

The most popular PP design was first described by Freeman in 1975.[2] This style of PP has a wide disc-shaped top/cap that sits level on the punctal opening to prevent plug migration into the canaliculus. Conjunctival irritation caused by this exposed part of PP may warrant plug removal in a small number of treated patients (1.5%).[3] However, apart from spontaneous PP extrusion and loss (40% by 6 months),[4] other complications are rare and include bacterial conjunctivitis and punctal granuloma formation.

In literature, peripheral corneal ulceration has not been described in association with silicone PP. Although co-existing ocular surface disorder may have initiated the corneal ulceration in our case, the intermittent irritation by the edge of the fragmented PP top may have played a major role in maintaining it.

PP design with no exposed part (intracanalicular) theoretically eliminates local irritation; however, such design is associated with canaliculitis and dacryocystitis.[5] Among others, these complications should be addressed in future designs of PP. For early