Eye love you

Valentine's Day is a time to say "I love you"; however, the term "eye love you" is rarely, if ever, used. In this article, we present rare cases of ocular pathology that have adopted a heart-shaped appearance. Cupid's cornea (Fig. 1A) demonstrates a heart-shaped endothelial fungal plaque associated with metallic foreign body. Aphrodite's atrophy (Fig. 1B) represents a fundus autofluorescence image of geographic atrophy that demonstrated a heart-shaped hypoautofluorescence. Finally, lover's laser (Fig. 1C) depicts barrier laser retinopexy during vitrectomy surgery that was noted to have adopted the shape of a heart.

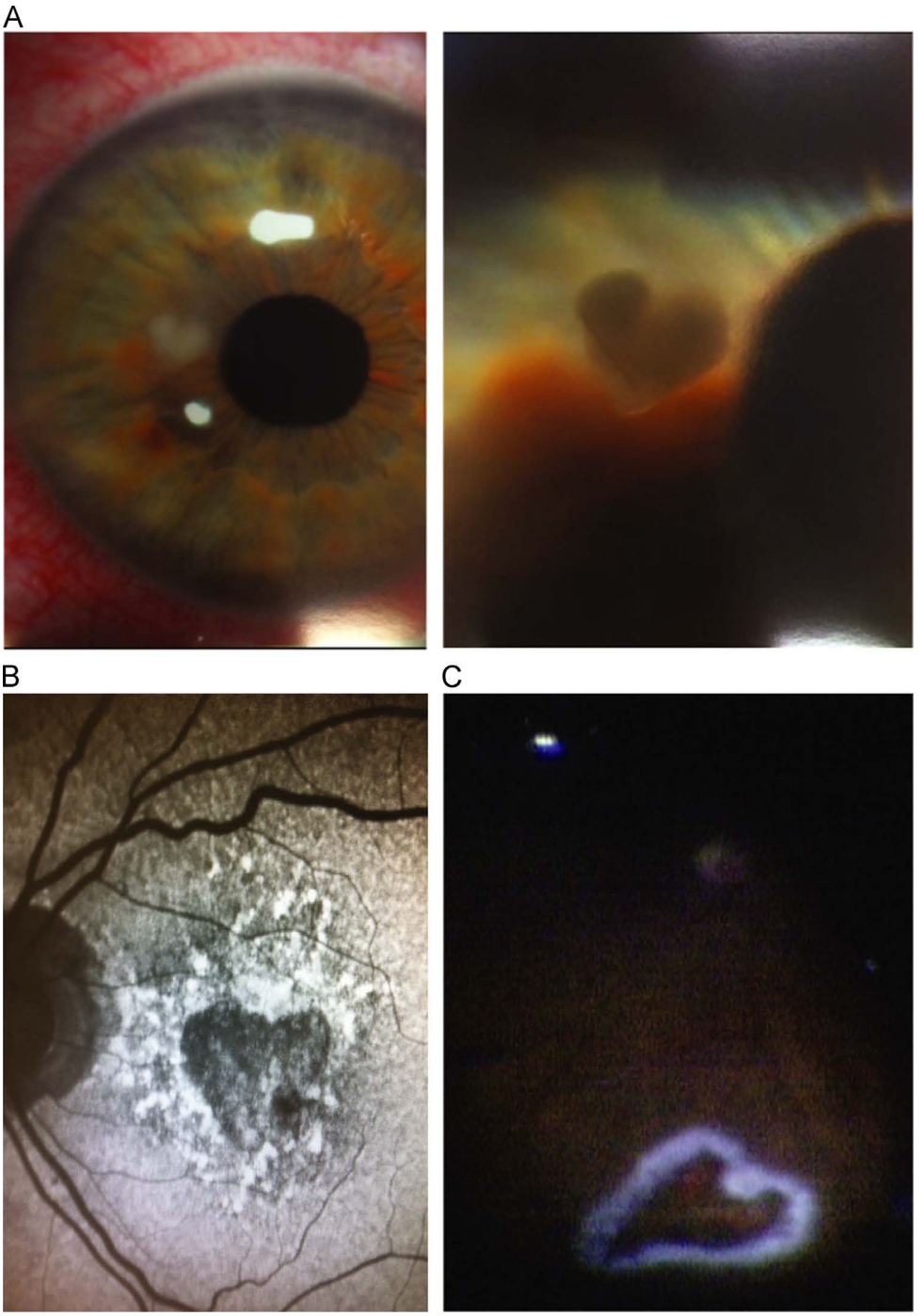

Fig. 1—"Eye love you." A, Cupid's cornea. B, Aphrodite's atrophy: fundus. C, Lover's laser.

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Posterior subcapsular cataracts and hypotony secondary to severe pembrolizumab induced uveitis: Case report

Pembrolizumab (MK-3475, previously known as lambrolizumab) is an anti–programmed death receptor-1 (PD-1) antibody that has been used to treat refractory melanoma. Particularly, pembrolizumab activates cytotoxic T lymphocytes to stimulate tumor cell death.[1] PD-1 is expressed on antigen-stimulated T cells. When bound to the PD-1 ligand (PDL-1), PD-1 results in T-cell suppression in peripheral tissues.[2] Cancer cells (such as melanoma) express PDL-1, which hinders immune attack of malignant cells.[3] Anti-PD-1 works by inhibiting the interaction of PD-1 and PDL-1 and thus reverses this immune suppression induced by cancer cells.[4]

Nivolumab (BMS-936558) was the first drug of this class. Rare cases of immune-related adverse events included pneumonitis, vitiligo, colitis, and thyroiditis.[5] Pembrolizumab caused similar immune-related side effects.[6] To date, there have been no published reports of anterior segment pathology secondary to anti-PD-1 antibody therapy. In this case study, we describe a complex presentation of severe uveitis, hypotony, and posterior subcapsular cataracts in a patient on pembrolizumab.

A 63-year-old female was referred to ophthalmology with a 2-week history of bilateral blurred vision and photosensitivity and 3 days of new floaters. She had a history of metastatic melanoma, initially diagnosed in 1996, and since then had recurrence to advanced melanoma. She wore progressive lenses, had no past ocular surgery, and was not using any eye drops. She had been started on pembrolizumab (10 mg/kg) by dermatology as part of a multicentre, randomized Phase III study.

On exam, her best corrected visual acuity (BCVA) was 20/30 OD and 20/25 OS. Her pupils were mid-dilated and very sluggish, but reactive. Goldman tonometry demonstrated a pressure of 6 mm Hg OU (central corneal thickness 504 OD and 491 OS). Slit lamp anterior exam demonstrated bilateral punctate epithelial erosions, peripheral anterior synechia, 3+ to 4+ cells, and 1+ flare in deep anterior chambers. Anterior vitreous cells were present, along with 1+ nuclear sclerotic cataracts. Dilated fundus exam demonstrated a reduced red reflex OU, and macular optical coherence topography demonstrated no pathology.

She was diagnosed with bilateral severe nongranulomatous anterior uveitis presumed to be secondary to pembrolizumab. She was started on prednisolone acetate every hour OU, homatropine once daily OU, and dexamethasone every night OU. Over the next 3.5 months, attempts to taper her prednisolone acetate resulted in a flare of anterior uveitis that eventually improved. Some hyperopic shift and anterior chamber (AC) shallowing was noted.

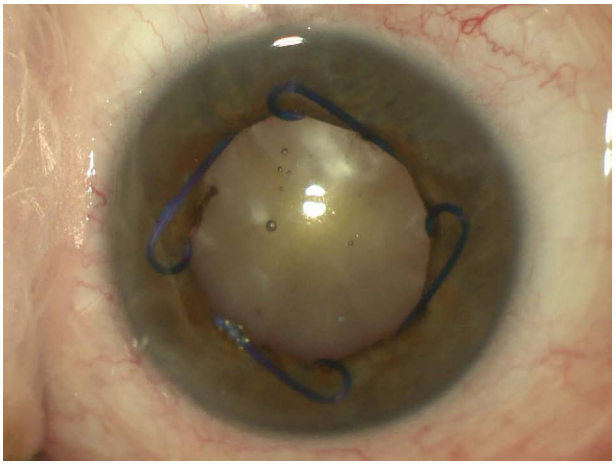

Fig. 1—Image taken during surgery shows a dense posterior subcapsular cataract in the left eye. A Malyugin ring was required to maintain pupil dilation.

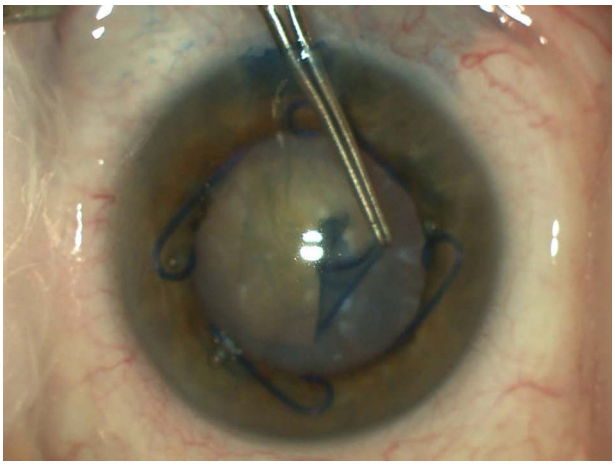

Fig. 2—Intraoperatively, trypan blue ophthalmic solution was used to visualize the anterior capsule as the lens was white and swollen.