A Case of Avelumab Induced Uveitis

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Introduction

Drug induced Uveitis is a rare cause of uveitis, with an incidence of less than 0.5%.

Immune checkpoint inhibitors, such as anti PD-1 monoclonal antibodies, are a known cause of drug induced uveitis, with presentation ranging from anterior uveitis, panuveitis to progression to serous retinal detachment. Symptoms may include redness, pain, sensitivity, and blurred vision.

This case describes a patient with bilateral anterior uveitis secondary to Avelumab, a PD-L1 checkpoint inhibitor immunotherapy.

Case Presentation

A 69-year-old female with a history of Stage IV Merkel Cell Carcinoma on Avelumab chemotherapy (started twenty-two months prior) presented for decreased vision.

Ocular history was notable for Mac-On RRD OS, Macular pseudohole OS, and CEIOL OS.

Exam was notable for BCVA OD: 20/250 OS: 20/300, and bilateral keratic precipitates (Figures A and B).

Review of systems was negative for any inflammatory or infectious etiology.

Treatment included daily topical steroids, with minimal improvement. Oral steroids were added for one month, but the patient's bilateral uveitis remained stable for one year, despite topical and oral steroid use, as she remained on Avelumab for cancer therapy.

Figures

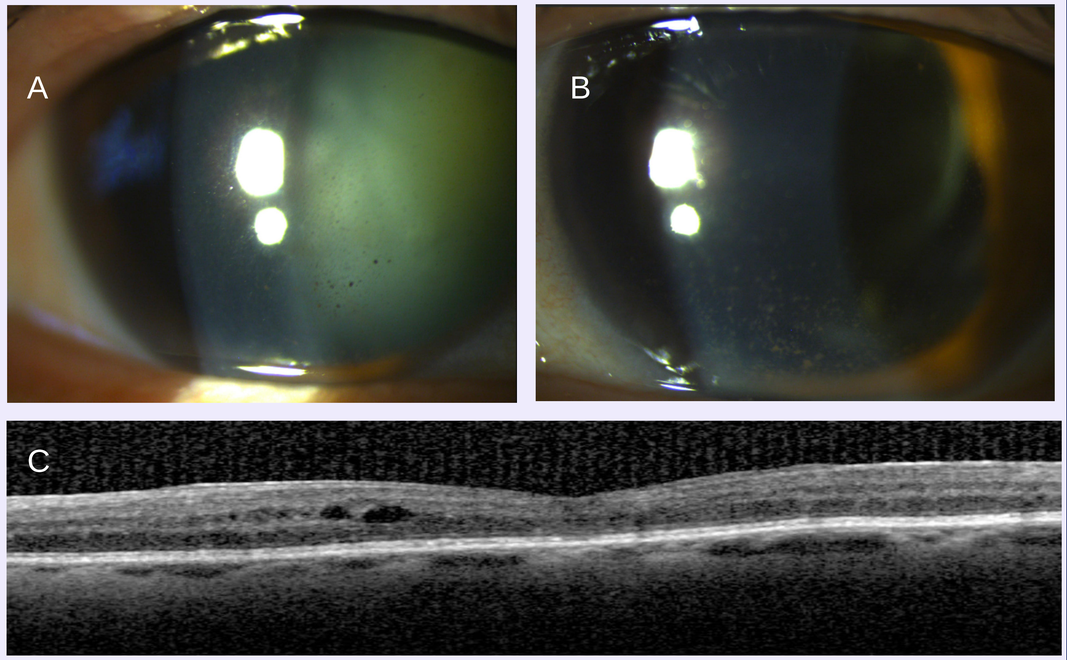

Figure A-B: Slit lamp photography of the right (Figure A) and left (Figure B) eye demonstrating keratic precipitate deposition on the corneal endothelium.

Figure C: Optical Coherence Tomography demonstrating the lack of vitreous cell and presence of chronic intraretinal fluid in the left eye.

Discussion

This case describes a patient with bilateral anterior uveitis, presenting twenty-two months after starting chemotherapy treatment with Avelumab, a PD-L1 checkpoint inhibitor.

Though not previously reported as causing anterior uveitis, Avelumab is drug in a similar class as other check point inhibitors, such as Pembrolizumab (PD-1 checkpoint inhibitor), which have been known to cause uveitis.

Given that this patient did not have any other likely causes of uveitis, such as infection or relevant autoimmune disorders, we strongly suspect the presence of treatment refractory anterior uveitis as a result of persistent Avelumab use.

Conclusion

In the absence of other infectious or inflammatory etiologies, patients with anterior uveitis on Aveumab may have drug induced uveitis.

Although previous cases have not been reported, physicians should be aware of Avelumab as a potential cause of drug induced uveitis.

Treatment options include topical steroids, with possible escalation to intravitreal dexamethasone implant, or consideration of alternative chemotherapy medications if possible.

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