

Consecutive Shock States Leading to Vision Loss

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Background

It can be challenging to elucidate the cause of vision loss in hospitalized patients. One common condition that can have devastating ophthalmic consequences is ischemia. Two ischemia-related ocular conditions are anterior ischemic optic neuropathy (AION) and posterior ischemic optic neuropathy (PION). AION can be distinguished by optic nerve head swelling on fundoscopic exam. AION is divided into arteritic and non-arteritic. Arteritic AION is generally due to giant cell arteritis (GCA) requiring prompt steroid treatment. There is no consensus treatment for NAION.

Clinical Case

A 62-year-old man with no previous medical history presented for fever, and diffuse maculopapular nonpruritic rash. The patient was admitted to the MICU for septic shock. Cultures, TEE, respiratory panel and other initial infectious serologic workup of the patient was negative. The patient was empirically treated with aggressive fluid resuscitation and broad-spectrum antibiotics. The patient's ICU course was complicated by cardiogenic shock secondary to an NSTEMI. PCI found 80% right coronary artery occlusion and the vessel was stented. The patient was given a new diagnosis of HFrEF (EF 30%). The day following the stent placement, the patient experienced acute persistent complete loss of vision in his right eye, blurriness of the left eye, and eye pain bilaterally. Ophthalmologic exams identified bilateral optic disc edema (worse on the right side) and evidence most consistent with damage from an ischemic state.

Conclusion

In this gentleman, the history of two shock states and the fundoscopic examination finding of optic nerve head swelling strongly suggest AION. The final diagnosis given to this patient was shock-induced anterior ischemic optic neuropathy (SIAION). This is one of the first documented cases of AION secondary to a cardiogenic shock due to acute coronary syndrome and also one of the first documented cases of AION following two consecutive shock states.