

Pinguecula in the Setting of Subconjunctival Hemorrhage

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A 20-year-old woman presented to an outpatient clinic with monocular redness, irritation, and eye pain upon waking that morning. She stated that her right eye felt irritated as if she had something in her eye, and it was now painful with movement. She had consumed alcohol with her friends the night before and had fallen asleep with her makeup on, which she believed might be the cause of her symptoms. She was also concerned about a “white area” in the middle of the growing red region of her eye. The patient does not wear contacts or any other ocular prosthetics. She reported no known trauma to the area, and she denied vision changes, flashes, floaters, discharge, photophobia, or pruritus.

Physical examination. The patient had stable vital signs, including a blood pressure of 116/58, and she had 20/20 visual acuity in each eye. Ocular pressures were within normal limits of 10 to 22 mm Hg (OD [right eye], 16 mm Hg; OS [left eye], 14 mm Hg). The patient’s pupils were equal, round, and reactive to light. Extraocular movements were full and without pain. Examination of the right eye revealed a dark red patch over the medial sclera with a small, raised, opaque, yellow-white lesion on the medial bulbar conjunctiva that did not extend across the cornea (**Figure**).



Figure. Photo of pinguecula with subconjunctival hemorrhage

Differential diagnosis. The differential diagnosis of unilateral eye redness can include a variety of inflammatory processes including uveitis, conjunctivitis, keratoconjunctivitis, and scleritis. Given the restricted nature of the redness, the lack of infectious signs, and the appearance of dark red blood, the most likely diagnosis in this patient was subconjunctival hemorrhage (SCH) secondary to trauma or intraocular pressure increase.

Regarding the lesion, the differential diagnosis included a variety of external ocular growths, including pterygium, pinguecula, or pannus. Given the small size, the location on the medial conjunctiva, and the lack of extension over the cornea, a diagnosis of pinguecula was most likely. Pingueculae tend to be slow growing, so it is likely that this patient's pinguecula had been present for some time prior to presentation, but it was visualized more clearly due to the underlying SCH.

Treatment. SCH is a common, self-limiting condition that, in most cases, requires no specific treatment aside from reassurance that the eye will return to normal within 2 to 3 weeks.¹ A pinguecula is a benign conjunctival growth that is commonly noted as a cosmetic blemish, although it is capable of causing irritation. It requires monitoring but no immediate intervention. A pinguecula does not invade the cornea and therefore does not cause vision loss; it can, however, progress to a pterygium, which requires more careful monitoring and surgical excision if it impairs vision.² This patient was counseled that the redness would likely resolve on its own, and an appointment was made for a 1-week follow-up visit.

Outcome. At 1 week, the ocular pressure in each eye was again within normal limits (16 mm Hg OD; 14 mm Hg OS). The patient's visual acuity was 20/20 in each eye, and the pupils were equal, round, and reactive to light and accommodation, with intact extraocular movements. The SCH was still present but was significantly reduced in size and was not causing irritation. The pinguecula appeared unchanged, and the patient was counseled to wear sunglasses and hats when outdoors in order to reduce UV radiation exposure. No emergent treatment was required for either condition, and a note was made to continue monitoring the pinguecula.

Discussion. SCH is a common, generally self-limiting condition. In most cases, no specific treatment is needed, and the patient should be reassured that the appearance of the eye will return to normal within 2 to 3 weeks.¹ Although most cases are idiopathic, recurrent SCH, or SCH in a patient with known trauma, an underlying hematologic disorder, or hypertension may require additional workup. In younger patients like this one, the major risk factors for SCH are trauma and contact lens use.³ An additional risk factor for SCH among contact lens users in particular is the presence of an underlying pinguecula.⁴

A pinguecula is a benign conjunctival growth that is closely related to a pterygium. Pingueculae are small, often bilateral, yellow/white masses located within the bulbar conjunctiva (outside the cornea) that they can cause irritation but are usually just cosmetic concerns. Pingueculae are extremely common with increasing age, with prevalence estimates ranging from 22% to 70% in adults, but they are rare in pediatric populations, with an estimated prevalence of 1% to 10%.⁵⁻⁸ While they may enlarge with time, they do not generally grow into the cornea. Pterygia, on the other hand, are fleshy, vascularized growths capable of invading the cornea and causing associated vision loss.² Both pingueculae and pterygia are more common on the nasal rather than temporal conjunctiva and can be surgically excised if they cause significant irritation, cosmetic concern, or vision loss.

Both pingueculae and pterygia have been linked to prolonged UV radiation exposure, likely explaining the rarity in pediatric populations.⁹ Pterygia are occasionally referred to as “surfer’s eye” or “farmer’s eye” due to this association with UV radiation exposure. Pingueculae may rarely convert to pterygia, which require more careful monitoring and surgical excision if they impair vision.² Early primary pterygia have also been linked to severe visual problems, including irregular astigmatism.¹⁰

As in this patient’s case, the presence of a new mass or lesion in the eye can be quite alarming for patients and providers alike. Because pingueculae are capable of progressing to pterygia, these lesions should be monitored, and patients should be counseled to reduce future UV radiation exposure. Rapidly progressing lesions or those interfering with vision should be promptly referred to an ophthalmologist.

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