

## Hyphema

Blunt trauma to the eye may result in bleeding in the front portion of the eye, the anterior chamber. This condition is known as a **HYPHEMA**. Force exerted onto the eye stretches and distorts the globe and its contents. The blood vessels of the delicate pigmented tissues (iris and ciliary body) are the most common sites of the bleeding. This bleeding stops in response to clot formation, blood vessel spasm and increased intraocular pressure. With time, however, the clot dissolves, the blood vessel wall relaxes and the intraocular pressure decreases. At this point, if the damaged tissues have healed then the patient simply needs to be followed for the development of glaucoma. However, if the healing has not restored the strength and integrity of the blood vessel wall, **REBLEEDING** may occur.

Rebleeding usually happens 3 to 7 days after the initial injury. A general rule states that the larger the hyphema, the greater the likelihood of a rebleed. Rebleeding can be serious because it can cause pain, glaucoma, optic nerve damage and corneal blood staining.

The goal of therapy is to facilitate the clot removal, assist with vessel healing and prevent future complications. A reduction in activities is mandatory. Hospitalization is usually not required if there is good home management. Strict bed rest is helpful with a gradual increase in activities after the first week. It is recommended to sleep with the head of bed elevated. Contact sports and the use of blood thinners such as NSAIDS (aspirin, ibuprofen) should be avoided for several weeks. Anti-inflammatory eye drops and dilating drops tend to ease the discomfort of hyphemas. Pressure reducing eye drops may also be required. Frequent examinations are necessary during the first few days.

An oral medication named aminocaproic acid is sometimes used to prevent large hyphemas from rebleeding. This is usually not required in patients with smaller hyphemas. Aminocaproic acid has possible significant side effects such as nausea, vomiting, kidney problems and lowered blood pressure. A small percentage of patients (5%) require surgery to remove the clot. Reasons for this include a large clot which is not resorbing, prolonged increased intraocular pressure and corneal blood staining.

Visual outcomes are generally good. Factors which may reduce vision following the clearing of the blood include cataract formation, optic nerve injury, concomitant damage to the back of the eye, corneal blood staining and angle recession glaucoma.

In conclusion, a hyphema is bleeding in the front of the eye secondary to trauma. Immediate attention is needed to initiate proper treatment. Because glaucoma can develop many years after the initial injury, a patient who has suffered a hyphema needs to be followed on a long-term basis.

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