

# Hyphema

By Joel D Aronowicz, M.D..

In my personal experience trauma to the eye is one of the most common causes a patient will come for evaluation at an eye clinic, and a hyphema is one of the most common presentations of bleeding in the eye after a trauma. Its identification and management is essential to help patients preserve their vision<sup>1</sup>.

Traumatic hyphema occurs most common on young adults from an injury to the vessels of the peripheral iris or anterior ciliary body.

At presentation, 50 % of hyphema occupy less than 1/3 height of the anterior chamber, 10% fill the whole chamber. Most of them, unless complications arise have a good prognosis<sup>1</sup>.

Spontaneous hyphema are less common and should prompt examination for possible rubeosis of the iris, clotting abnormalities, herpetic disease, and intraocular lens abnormalities. In children, juvenile xanthogranuloma, retinoblastoma and leukemia are often associated<sup>1</sup>.

Medical management consist of minimizing possibility of secondary bleeding, treatment of elevated IOP is required to reduce chance of corneal blood staining and optic atrophy<sup>1</sup>.

The following recommendations are agreed to be beneficial, consisting of a protective shield over the injured eye, moderate restriction of physical activities, elevation of the head of the bed, and frequent observation. In multiple cases hospitalization will be necessary, for instance

African American patients with sickle trait or disease, or if IOP is elevated >30mmHg for more than 24 hours<sup>1,2</sup>.

Treatment consist of cycloplegic, preferable atropine 1% BID or TID, Topical steroids (e.g prednisolone 1%) every 2-6hrs, IOP control medications, with caution in the use of carbonic anhydrase inhibitors or osmotic agents in sickle cell trait or disease patients. Although sometimes it's an unavoidable choice when intraocular hypertension is not controlled with other medications. If no improvement is present or IOP stay's elevated for at least 5 days(>25-35mmHg) , surgical evacuations maybe needed<sup>1,2</sup>.

When the hyphema resolves, gonioscopic evaluation is preferred around 6-8 weeks after, to evaluate structures and iris damage. Glaucoma is a common late complication; other complications include corneal staining or cataract that may need removal in the future.

I hope this brief article helps you understand the basic presentation and management of this common traumatic condition.

## REFERENCES

- 1.American Academy of Ophthalmology. BCBS section 8. External disease and Cornea, 2006-2007. Chapter 19 “: clinical aspect of toxic and traumatic injuries of the anterior segment”, pages 398-403.
- 2.Color Atlas & synopsis of Clinical Ophthalmology. Wills eye institute, Cornea, second edition, Series Editor: Christopher J. Rupuano, Chapter 11 page 350. Lippincott Williams & Wilkins 2011

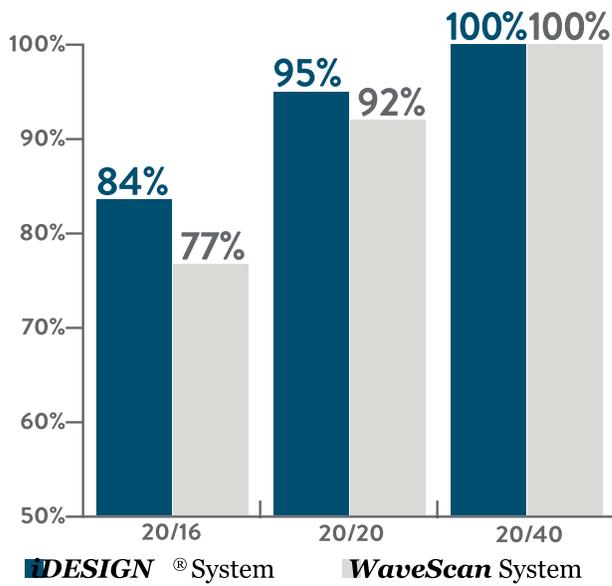




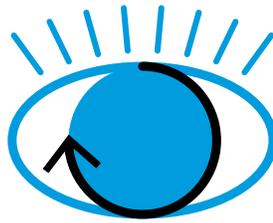
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We have invested in the purchase of the iDESIGN® the newest and most accurate custom guided LASIK technology in the US. The iDESIGN® will allow us to treat a broader range of patients and it is approved to capture a wide range of pupil sizes.

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Better outcomes ( $p < 0.0001$ ) compared to **WaveScan** System<sup>1</sup>



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The share of eyes with postop UCVA

## BETTER THAN

preop BCVA, compared to 67.1% with

**WaveScan** System<sup>1</sup>



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(based on a retrospective review of our last 50 myopic eyes) to match wavefront refraction and true refraction



### TREAT A BROAD RANGE OF PATIENTS:

- Myopia with up to -11.00 D SE, with up to -5.00 D cylinder
- Mixed astigmatism with cylinder (1.00 to 5.00 D) greater than sphere
- Patients  $\geq 18$  years old

1. Optical Express Data

Additional features that make the **iDESIGN®** System **FAST, PRECISE, AND EASY** to use for surgeon and staff:

- Highly sophisticated algorithm.
- Quickly captures and compares exams until an acceptable exam is achieved.
- Calculates the refraction for distance at optical infinity to provide the patient with the sharpest distance vision.
- Coupling compensation for high cylinder is built in.
- Keratometry is calculated from topometric data and automatically entered into the system.
- Device automatically prints treatment and saves it to USB.
- Technicians find it efficient and easy to use.

**Trusted by many doctors, the wavefront-guided LASIK procedure is proven to help a majority of patients see 20/20 or better.<sup>5</sup>**

The **iDESIGN®** System uses a unique process to map the eye's entire visual pathway, not just the front of the eye (cornea), to make the procedure 100% personalized.

- *The idea of being “personalized” is important as it communicates it is something unique to each person and a procedure just for them.*
- *“Entire visual pathway” and/or “not just the cornea” is important since it clearly differentiates the **iDESIGN®** System driven procedure from other LASIK procedures and makes it uniquely appealing.*

**Excellent patient reported visual functioning and well-being<sup>1</sup>.**

- Patient reported measures of visual functioning and well-being are powerful and persuasive information. It gives confidence and reassurance to the success of the process, and helps alleviate some concerns.

Patients in the FDA myopia clinical trial who had LASIK powered by the **iDESIGN®** System reported significant improvements in ALL measures of visual functioning and well-being, including<sup>1</sup>:

Furthermore, studies with myopia patients support high patient satisfaction with LASIK powered by the **iDESIGN®** System, including:<sup>2,3,4</sup>

- >96% of patients were willing to recommend the procedure to their friends and family.<sup>2,3,4</sup>
- >91% of patients were satisfied to very satisfied with their vision.<sup>2,3,4</sup>

References:

1. FDA myopia clinical study P930016/S044
2. Schallhorn SC, Venter JA, Hannan SJ, Hettinger KA. Outcomes of Wavefront-guided Laser in situ Keratomileusis Using a New-Generation Hartmann-Shack Aberrometer in Patients with High Myopia. J Cataract Refract Surg 2015; 41:1810–1819 (N=371)
3. Schallhorn SC, Venter JA, Hannan SJ, Hettinger KA. Wavefront-guided Photorefractive Keratectomy with the Use of a New Hartmann-Shack Aberrometer in Patients with Myopia and Compound Myopic Astigmatism. J. of Ophth, volume 2015. (N=296)
4. Schallhorn SC, Brown M, Venter JA, Teenan D, Hettinger KA, Yamamoto H. Early Clinical Outcomes of Wavefront-Guided Myopic LASIK Treatments Using a New- Generation Hartmann-Shack Aberrometer. J Refract Surg. 2014;30(1):14-21. (N=67)

## The 22th Annual Key West Educational Conference

We would like to thank all the doctors who attended the 22th Annual Key West Educational Conference and extend our appreciation to Dr. Kenneth Lawson, Dr. John McSoley, Dr. Chris Wroten and Dr. William Marcolini for their educational presentations. Doctors who attended the conference acquired 9 continuing education credits and 6 hours of transcript quality credits. We hope to see you all next year at our 23rd Annual key West Educational Conference.



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# NEWSLETTER FALL 2017

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