The University of Arkansas for Medical Sciences
Trauma Clinical Practice Management Guideline

SUBJECT: Ophthalmic Trauma Consultation
AUTHORS: Kyle J. Kalkwarf, MD; Ahmed Sallam, MD; Zachary Lewis, MD; Richard Betzold, MD

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PURPOSE: To provide guidelines for bedside ophthalmic consultation in traumatically injured patients.

POLICY: The ophthalmic service will evaluate or develop a safe follow-up plan for all trauma patients for whom a consultation has been requested.

DEFINITIONS:

- Urgent ophthalmology consultations should be initiated immediately after diagnosis, when the patient is available for evaluation and treatment (e.g., not while in the operating room or IR for an emergency procedure). The patient should be evaluated **within 60 minutes of consultation**.
- Non-urgent consults should be communicated to the Ophthalmology service based on timing:
  - During regular business hours, the consult should be placed, and the patient should be evaluated on the same day.
  - Overnight, the consultation should be placed in the morning, and the patient should be evaluated before clinic or scheduled operative cases.

PRIORITY CLASSIFICATION OF OPHTHALMIC DIAGNOSES & CLINICAL FINDINGS:

Urgent (Immediate Bedside Evaluation Required):

- Severe acute vision loss
- Flashes of light, numerous new floaters, or “curtain over vision” (symptoms of retinal tear or detachment)
- Open globe injury (with or without intraocular foreign body)
  - Irregular pupil (possible open globe)
  - Severe bullous subconjunctival hemorrhage (possible occult globe rupture)
- Retrobulbar hemorrhage
- Hyphema
- Traumatic cataract
- Intraorbital foreign body
- Eyelid laceration
- Orbital fracture with concern for extraocular muscle entrapment
- Discretion of the Emergency Medicine or Trauma attending physicians

Semi-Urgent (Call to Develop a Plan Required):

- Ophthalmic evaluation and disposition are precluding the discharge of the patient from the Emergency Department

Non-Urgent (Call during workday or next morning, and see the day called or schedule prompt outpatient follow-up, when acceptable):

- Orbital fracture without concern for globe injury or extraocular muscle entrapment
- Corneal abrasion

EYE PROTOCOL FOR TRAUMA/ED CONSULTS:

1. **External eye exam** – including photos (if feasible)
    - Attempt to open swollen eyelids gently.
2. **Visual acuity** – assess each eye individually using a Snellen chart.
    - If the patient cannot read the chart, proceed stepwise:
        i. Count fingers → Hand motion → Light perception → No light perception
3. **Pupil exam** – document size, reactivity, and presence of relative afferent pupillary defect.
4. **Extraocular movements** – note any restriction, affected eye, and direction.
5. **Imaging** – obtain a **CT scan without contrast** (head or max-face imaging will satisfy the need for 1mm cuts) to assess for:
    - Intraocular foreign body
    - Irregular globe contour
    - Orbital fractures
    - Retrobulbar hemorrhage
6. **Intraocular pressure*†** – check, especially if retrobulbar, intra-, or extraconal hemorrhage is suspected (the ED care team is usually available to assist with equipment and measurement).

**Note: The Emergency Department will make a good-faith attempt to perform the above examinations. However, due to the time-sensitive nature of urgent consults and the many possible reasons that an intraocular pressure may not be able to be obtained—such as Tonopen unavailability or malfunction, significant swelling, patient non-cooperation, or concern for an open globe—these examinations, particularly intraocular pressure, are not required before consultation and the Emergency Medicine or Trauma attendings may omit them. Omission of these exams will not preclude timely evaluation by the Ophthalmology service.*

†Note 2: Because the trauma team is not trained or credentialed to use a Tonopen and does not have access to one, intraocular pressure (IOP) will not be measured if a patient leaves the ED before the exam is completed or if an injury is identified later. The patient's condition may also limit other parts of the examination.

CONSULTATION PROCESS:

- All urgent consultations will be evaluated by the ophthalmology service as previously outlined.
- Once the steps for a non-urgent consultation are completed, Ophthalmology will be consulted. The Ophthalmology service will triage all non-urgent consults to determine:
    - **Morning examination** (non-urgent)
    - **Outpatient follow-up** (when appropriate).
- For **orbital fractures** with low concern for globe injury, retrobulbar hemorrhage, or extraocular muscle entrapment—as confirmed by ED team evaluation and imaging—Ophthalmology may defer urgent bedside evaluation and arrange prompt outpatient follow-up at discharge.

Reminders for ophthalmology exams

- Please confer with the trauma team before applying chemical dilating agents in any patient with suspected or confirmed traumatic brain injury (TBI).