1. Tactical Combat Casualty Care for Medical Personnel
   August 2018
   (Based on TCCC-MP Guidelines 180801)
   Tactical Field Care 2d
   Penetrating Eye Trauma

2. Disclaimer
   “The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the Departments of the Army, Air Force, Navy or the Department of Defense.”
   - There are no conflict of interest disclosures.

3. LEARNING OBJECTIVES
   Terminal Learning Objective
   • Perform assessment and initial treatment of penetrating eye trauma in Tactical Field Care.
   
   Enabling Learning Objectives
   • Identify the signs, symptoms and initial treatment of penetrating eye trauma in Tactical Field Care.
   • Describe the administration of a rapid field test of visual acuity in Tactical Field Care.

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4. **LEARNING OBJECTIVES**
   
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   - Describe the application of a rigid eye shield to a trauma casualty in Tactical Field Care.
   - Identify the reasons for avoiding the application of any pressure on an eye with a suspected penetrating (open globe) injury.

5. **Tactical Field Care Guidelines**
   
   **8. Penetrating Eye Trauma**
   
   a. If a penetrating eye injury is noted or suspected:
   - Perform a rapid field test of visual acuity and document findings.
   - Cover the eye with a rigid eye shield (NOT a pressure patch.)
   - Ensure that the 400-mg moxifloxacin tablet in the Combat Wound Medication Pack is taken if possible, and that IV/IM antibiotics are given as outlined below if oral moxifloxacin cannot be taken.

6. **Eye Trauma Video**
   
   Click on the photo to play the video.
| 7. | **The Value of Eye Shields**  
Use eye SHIELDS – not pressure patches! |
|---|---|
| 8. | **Eye Protection**  
- Use your tactical eyewear to cover the injured eye if you don’t have a shield.  
- Using tactical eyewear in the field will generally prevent the eye injury from happening in the first place! |
| 9. | **Retrobulbar Hemorrhage: Orbital Compartment Syndrome**  
- Mentioned in the video  
- Similar to extremity compartment syndromes  
- The orbit is a restricted compartment  
- Trauma may cause bleeding in the orbit  
- Bleeding increases the pressure in the orbit and eye |

Click on the photo to play the video.

Tactical eyewear can be used to protect the eye if no eye shield is available.  
Use of tactical eyewear is an excellent way to prevent this type of injury.

Read the text.
### 10. Retrobulbar Hemorrhage

In addition to the obvious lid swelling, this casualty also has forward displacement of his left globe indicating that there is increased pressure in the orbit.

### 11. Retrobulbar Hemorrhage

- **S/S:** Pain, proptosis, decreased vision ("bloody, blind, and bulging")
- Causes elevated pressure in the eye
- May cause **permanent blindness** due to lack of blood flow or optic nerve damage
- Must get the pressure in the eye down quickly
- Emergent evacuation is needed
- Lateral canthotomy (cutting the ligament that limits the orbital space) is the definitive management.

Read the text.

### 12. Questions?

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