GUIDELINES FOR PERIOPERATIVE CORNEAL INJURY MANAGEMENT

PURPOSE

The purpose of this guideline is to provide for a safe and efficient process for the prevention management of corneal or conjunctival irritation in the perioperative period.

BACKGROUND

- According to a 1992 closed claims review, corneal abrasion is the most common perioperative ocular complication
- Varies widely (0-44%) depending on study design, prophylactic intervention, etc.

PATIENT RISK FACTORS

- Exophthalmos, (Grave's disease), lagophthalmos, entropion, ectropion,
- Contact lens wearer,
- Congenital or acquired condition that cause eye dryness. diabetes, rheumatoid arthritis, lupus, scleroderma, Sjogren's syndrome and vitamin A deficiency.
- Refractive eye surgeries such as laser-assisted in-situ keratomileusis (LASIK).
- Patients who sleep with their eyes open.

PREVENTION

- Taping eyes during a General anesthetic alone provides sufficient protection (no added benefit when used in combination with ointment or viscous eye drops). The lid must be fully closed with care taken not to invert the eye lashes into the conjunctiva. Consideration may be given to taping the eyes of high-risk patients undergoing MAC anesthesia, understanding that MAC represents a continuum of anesthetic depth with the possibility of conversion to general anesthesia.
- The tape should be placed horizontally across the entire lid line. The tape should be placed after loss of lid reflex on induction and prior to securing airway (except during RSI when securing airway takes precedent).
- Use only preservative-free solutions if eye drops are used. Paraffin based ointments have been associated with increased morbidity and should be avoided
- Water-based viscous eye drop solutions are not associated with either an increase in morbidity or decrease in incidence of corneal abrasion compared with tape alone.

DIAGNOSIS

- Signs and symptoms- itching, burning, stinging, foreign body sensation, painful eye, worse pain with blinking, photophobia, blurred vision, redness of the eye, excessive tearing, miosis, blepharospasm

TREATMENT

- Carefully exam both eyes with a flashlight. Ask the patient to look in all the different direction to examine the fornices.
- If any foreign bodies or eye lashes are found irrigate with saline and see if symptoms resolve.
- If no foreign bodies are evident and the patient does not have any risk factors mentioned above. Prescribe a topical ophthalmic ointment like erythromycin ointment four times a day or a topical antibiotic solution (ofloxacin 0.3% ophthalmic solution or gentamicin 0.3% ophthalmic solution) four times a day along with Ketorolac 0.5 Opthalmic solution 1-2 drops up to 4 times a day for 24 hrs. for symptomatic relief ONLY.
- Mydriatics are not recommended. Covering/Patching of the affected eye is not recommended.
- Discontinue contact lenses until abrasion has healed.
- If the patient does not have any risk factors mentioned above, follow up with ophthalmology if the pain increases or foreign body sensation persists longer than 2 days. By calling 617-667-4903 and ask to be seen in 1-2 days by an eye provider at BIDMC.
- In patients who have risk factors mentioned above call page the Eye Resident on call and ask for an immediate consult.

PROGNOSIS

- In most patients without risk factors there is decreasing pain over the first 24 hours and complete resolution in 3-4 days. Permanent sequela is rare. Progression to corneal ulceration or infection is rare in patients without risk factors.

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ALGORITHM FOR THE MANAGEMENT OF SUSPECTED CORNEAL INJURY