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| Eyelid Laceration repair | |
| Relevant Anatomy | Eyelid Anatomy (connective tissue, tarsal plate, orbicularis oculi muscle) |
| Restraint | Standing Sedation with Xylazine |
| Site Preparation | The periocular tissues are thoroughly cleansed with 10% povidone-iodine solution and with sterile saline rinses. |
| Equipment/Materials | -Needle driver  -Forceps  -Absorbable (2-0 vicryl) and Non-Absorbable (2-0 silk) Suture  -Lidocaine 2%  -Xylazine  -Tetanus Toxoid  -Fluorescein dye  -3 ml Syringe  -20 gauge 1-inch Needle  -Halter and lead rope |
| Anaesthesia | Local anaesthesia performed via the auriculopalpebral nerve block using 1 ml of Lidocaine. Causes loss of movement of the eyelid. |
| Drug Calculation | Sedation:  Xylazine 2%, 50 kg Goat  Dosage: 0.025 mg/kg  Concentration of Xylazine: 2 x 10= 20 mg/ml  Volume Administered: Weight x Dose = 50 kg x 0.025 mg/kg                                        Concentration          20 mg/ml  Volume: 0.0625 ml Xylazine  Using a concentration of 1 mg/ml Xylazine  Weight x Dose = 50 kg x 0.025 mg/kg = 1.25 ml Xylazine   Concentration          1 mg/ml  Volume Administered: 1.25 ml Xylazine |
| Why is it necessary? | To maintain the function of the eyelid which protects the globe (upper eyelid). |
| When is it done? | When the eyelid is lacerated (lower or upper), repair should be done as soon as possible if eyelid margin is involved. |
|  | Simple Two-layer closure: Stroma and Skin   1. Povidone-Iodine is used to clean the site and sterile saline is used to rinse. 2. Fluorescein dye test is done to determine whether the globe has been affected. 3. Check for any foreign bodies. 4. Debridement is done at a minimum if necessary. 5. The connective tissue is sutured in a simple continuous pattern using absorbable suture (Vicryl) in a way that it does not protrude through the conjunctiva and contact the cornea. 6. A figure-8 suture is placed to perfectly appose the eyelid margin (bites approx. 2 mm on each side of the laceration). 7. Non-absorbable suture (Silk) are placed in a simple interrupted suture pattern to close the rest of the skin.   Complicated Lacerations  -If medial canthus is involved, the nasolacrimal duct may be affected. Repair may be done under general anaesthesia to facilitate repair of the nasolacrimal duct or for placement of a stent. |
| Precautions | -Tetanus is given pre-operatively  -Suture knot should be oriented away from the conjunctiva and towards the skin. |
| Advantages | * Precise anatomical restoration especially at the eyelid margin minimizes chances of secondary complications. * Eyelids possess excellent blood supply and ability to heal. |
| Complications | * Failure of prompt repair → +/- lagophthalmos → exposure keratitis * Failure of accurate lid apposition at surgery → ectropion, entropion or trichiasis * Corneal ulceration * Infection |
| Prognosis | Good, if prompt, accurate repair. |