Ophthalmic surgery, tips and tricks

Objective: To review the most frequent Ophthalmic procedures performed in General practice after understanding the local anatomy.

Surgical instrumentation: the extraocular procedures can be performed with few specific surgical instruments: wire lid speculum Pediatric and adult), tissue forceps, cilia forceps, lid plate, standard needle holder, conjunctival forceps, chalazion forceps, tying forceps, Steven's curved and straight tenotomy scissors.
Sutures Types: Vicryl 6-0 For eyelid procedures. PDS 5 -0 for tarsorrhaphies. PDS 4-0 for orbital septum closure
The use of magnifying glasses is encouraged.

Proptosis repair: Recently proptosed globes, with less than 3 extraocular muscles avulsed are the appropriate candidates for repair. After placing the patient under general anesthesia, the area is shaved and prepped. A lateral canthotomy is performed. With Allis forceps the upper and lower eyelids are grasped and stretched from behind the globe, until the eyelids rest over the cornea. At this point the globe should return to the orbit. Occasionally the globe requires encouragement by gently pushing it caudally. The lateral canthotomy is closed. Two temporary tarsorrhaphies are placed.

Lateral canthotomy closure: Figure eight suture followed by one or two simple interrupted stitches. Vicryl 5-0.

Temporary tarsorrhaphy placement: Two horizontal mattress sutures are placed, one laterally, one in the middle of the eyelid, taking care of exiting the eyelid margin at the outlet of the tarsal glands. Stents made of Butterfly or French catheters are used to protect the skin.

Small eyelid mass removal, laceration repair: Eyelid margin suturing after either an eyelid mass removal or to repair a laceration, must be perfect, not just good. The eyelid margin must be perfectly aligned, otherwise the corneal surface will stand unnecessary abrasion and may develop ulcerations. Wedge, four sided or a laceration should be sutured from the eyelid margin towards the skin, placing a figure eight suture first, followed by as many as simple interrupted stitches are necessary. Suture recommended: Vicryl 6-0
Understand that surgical if removal or an eyelid mass with clear margins involves more than 25% of the eyelid length, requires a blepharoplasty (H-plasty, semicircular skin sliding flap, ect) and are better referred to the specialist.

Entropion correction: Once properly identified, lower entropion can be surgically corrected by the Holtz-Celsus technique with or without a wedge eyelid margin resection. Care must be paid to the placement of the first incision at the hair to no hair line close to the eyelid margin, and to the width of the strip of adjacent skin to be excised, in order to effectively "evert" the rolling inwards tarsal plate. A lid plate will provide support for the incision and wiil protect the cornea from unwanted mishaps. Suture recommended: Vicryl 6-0

Chalazion curettage: Eversion of the eyelid margin is easily achieved with the use of a chalazion clamp. Small size chalazions and their usually associated eyelid margin papilloma can be incised and curettage.

Third eyelid lacrimal gland proptosis: The pocketing technique is up to now the most approachable of the "cherry eye" repair techniques. After creating two bulbar conjunctival non-communicating incisions around the proptosed gland, a pocket is carefully created ventral to the globe, and the prolapse gland is covered by adjacent conjunctiva. After the procedure the gland must be adequately repositioned, the nictitans should have normal mobility and no damage to the glandular tissue or excretory ducts should be caused. Suture recommended: Vicryl 6-0

Enucleation: Is the surgical removal of the globe, third eyelid and conjunctiva. The simplest and most rapid of the enucleation techniques is the subconjunctival approach. The upper and lower eyelids involving the medial and lateral canthus are excised. Identifying the edge of the bulbar conjunctiva, the bulbar conjunctiva and tenon's capsule and incised at the 12 o'clock position with Steven's tenotomy scissors with blunt tips. The incision is extended 360 degrees, 5 mm caudal to the limbus. Using the scissors blunt tips, the dissection plane between the sclera and Tenon 's capsule is extended deeper until reaching the extraocular muscles. Transection of the extraocular muscles at their insertion rather than at their bodies minimized hemorrhages. After incision of the retractor muscle and oblique muscle, the globe will displace slightly forward. A small curved hemostat is placed is carefully positioned posterior to the globe. The optic nerve and surrounding arteries and vessels are transected anterior to the hemostat. Closing to the orbit is performed in several layers. First, a mesh work is created at the orbital septum with a simple continue suture. Then remaining soft tissue is apposed with a second simple continues sutures (there two with PDS 4-0). Then a subcuticular simple continue suture is placed (Vicryl 5-0). Skin closure is reinforced by simple interrupted stitches using 4-0 PDS.