

Bovine Eye Removal Surgery

Surgical Technique

This involves a transpalpebral enucleation as well as removal of all the orbital contents.

A transpalpebral ablation technique is utilized to remove the eye. The upper and lower eyelids are sutured closed or alternatively, eyelids can be closed using multiple towel clamps. A circumferential skin incision is made approximately 1 centimetre from the edges of the eyelids. Using a combination of blunt and sharp dissection, Mayo scissors are used to dissect through the orbicularis oculi muscle, fascia, and subcutaneous tissue surrounding the eye. The interior of the bony orbit is used as a guide. The medial and lateral canthal ligaments are sharply transected to allow access to the caudal aspect of the orbit. As there is a large vessel associated with the medial canthus, transection of the medial canthal ligaments is best left until necessary. Complete excision of orbital tissue is necessary in most cases of eye removal. The retrobulbar musculature and the optic nerve sheath should be transected as far caudally as feasible. A vascular clamp can aid in haemostasis while additional excision of remaining orbital tissue is undertaken.

The skin incision can be closed in a variety of patterns with a non-absorbable suture such as No. 3 nylon. Common patterns include the Ford interlocking, cruciate or simple continuous. An interrupted suture should be placed in the medial canthal portion of the skin closure to allow for facilitation of drainage if necessary.

If a cosmetic result is desired, a “trampoline” suture can be employed to reduce the hollow appearance of the orbit. However, it is not recommended in cases where there is periorbital infection or neoplasia present. Placement of a trampoline suture is done by grasping the periosteum on the dorsal and ventral rim of the orbit using a simple continuous pattern with No 2 polypropylene or equivalent non-absorbable suture. The sutures are tightened to allow for support of the overlying ocular skin. The skin is subsequently sutured using a Ford interlocking, cruciate, or simple continuous pattern and No. 2 or No. 3 nylon suture.