

Closure of Enucleations

Closure of 3 layers:

- 1) Periosteum
- 2) Subcutaneous
- 3) Skin

1) Periosteum

2-0 to 4-0 non absorbable suture on a taper needle, unless the orbit is infected or had a tumour. In this case, the use of an absorbable suture (PDS) would be warranted. Start the orbital closure by taking one bite of the periosteum in the dorsolateral orbital rim and tying a knot with at least 6 throws. **Do not try to take two bites of periosteum and bring them together in a knot.** This is unnecessary and will weaken the knot security. Zigzag them back and forth vertically across the orbital rim taking bites of the periosteum. Use forceps to extend the periosteum toward the centre and do not take large bites of periosteum (~1-2mm). Periosteum is very tough and you do not need large bites that will further contribute to a large gap in the closure. **Each pass of the suture should be checked to be sure it is a good bite of periosteum but trying to raise the head by pulling on the suture.** Once the suture has been zigzagged to the medial orbit, zigzag back to the lateral orbit where the periosteum is looser. There will almost always be a span in the periosteal closure that does not close and results in exposed suture material. This gap is narrower and occasionally absent following a transconjunctival enucleation because less tissue is removed. Be sure to remove all slack from the periosteal enclosure before finishing. To tie off the suture take two bites of periosteum on the same side of the orbit close together and tie to the loop suture. Trying to tie a knot on suture bites across the orbit from each other results in poor knot security

2) Subcutaneous

2-0 or 3-0 absorbable suture (PDS or vicryl) on a taper needle. Use a simple continuous pattern. For cosmetic results, do not incorporate dermis into the closure – only loose connective tissue or the skin closure will be distorted. Also, so not apply much tension in this closure or the skin will again be pursed result in reduced cosmetic outcome.

3) Skin

0 non-absorbable (nylon) suture on a cutting needle. The skin incision can be closed using a non-absorbable suture in any of these patterns 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. The skin sutures are removed routinely in 10 to 14 days, leaving the underlying trampoline sutures if utilized in place as a permanent support.

Sutures Patterns, Suture Materials & Needles:

<http://research.utsa.edu/files/larc/PrinciplesVeterinarySuturing.pdf>