Total Ear Canal Ablation – Lateral Bulla Osteotomy (TECA-LBO)

Information Sheet

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Ear disease is commonly seen in dogs and can be difficult to manage successfully. Dogs often show signs of head shaking, scratching, discharge from the ear or a malodorous smell. There may also hold be neurological deficits noted such as holding the head to one side (head tilt), flicking eyes (nystagmus), loss of blink and/or protrusion of the third eyelid and eyelid drooping.

Dogs with ear disease often also have other skin issues such as increased itching or chewing of the paws. The ear disease may affect one or both ears.

Causes of ear disease:
Primary factors – these cause external ear disease on their own (for example parasites, foreign bodies). Included in primary factors are skin disease due to food intolerances or atopy and dogs with underlying endocrine disease.
Predisposing factors – these make external ear disease more likely to occur or become established. These include masses in the ear canal, changes in the anatomy e.g. narrowing of the canal or excessive hair present, underlying disease e.g. atopy or food intolerances, excessive moisture e.g. swimming or excessive cleaning, middle ear disease and/or previous episodes of otitis.
Perpetuating factors – these are a consequence of external ear disease and make the ear disease worse. These include infection, middle ear disease and/or hyperplasia of the glands in the ear.

Treatment of ear disease:
Initial treatment of ear disease would be medical. This may in the form of medicated ear drops, ear cleaning, dietary trials, steroids, medication to decrease itch/treat atopy and/or antifungal medication. Ear flushes under anaesthetic may also be recommended and swabs for examination under a microscope and culture are often utilised.

When would surgery be advised?
TECA-LBO surgery would be advised in chronic, severe, end-stage ear disease – especially if the middle ear is involved. There is often severe narrowing of the ear canal, thickening of the lining and calcification of the cartilage of the canal.

Further imaging may be advised if there is suspicion of a tumour, if the middle ear needs to be assessed or if medical treatment is ongoing. X-rays are not useful in these cases so CT and/or MRI scans may be recommended.

Due to surgical complications, this surgery is considered a salvage procedure and the main aim is to improve pain and discomfort associated with the ear disease.

The entire ear canal and part of the skull is removed for this surgery and it is a painful procedure so overnight hospitalisation for pain management is required.

Complications:
- Wound healing complications or infection.
- Para-aural abscess – this can occur up to a year following surgery and would present as a swelling in the region of the surgical site (possibly with discharging tracts). This would require surgical exploration to treat and is reported in 6-10% of cases.
- Haemorrhage – this can vary from low grade bleeding making the surgery more difficult to life-threatening haemorrhage. Occasionally the surgery may have to be abandoned and

repeated on another day. This is reported in approximately 3% cases.

- Facial nerve damage – this is the nerve which supplies the blink and can be temporarily or permanently damaged. Dogs will require tear substitutes if they have underlying eye disease, are a brachycephalic breed or until they learn to blink using their third eyelid. This is reported in 13-36% of dogs (4-13% permanent).
- Fracture of the skull during opening of the middle ear.
- Altered ear carriage in dogs with upright ears.
- Hearing alteration – this will not be complete as the skull conducted component of hearing will still remain. Hearing is often impaired in chronic ear disease and most owners do not notice a difference in this before vs after surgery.
- Vestibular injury – this will cause a head tilt, eye flickering and difficulty walking. This usually improves in the first month following surgery and is rare in the dog.
- Horner's syndrome – this causes an uneven pupil size, drooping of the eyelid and the third eyelid to sit across the eye. This is rare in the dog.

Overall success of surgery is reported in 57-92% of dogs.

Post-operative care:

Antibiotics are usually given around the time of surgery and a swab of the ear may be taken at the time of surgery.

Pain relief – strong pain relief will be administered in the hospital and this will be continued at home with oral medication.

Hospitalisation – this will be overnight for administration of pain relief.

Wound checks – routine checks will be 2 days and 10 days with stitch removal at 10-14 days. Further checks may be scheduled in between if there are any concerns.

TECA-LBO surgery will not improve other components of skin disease and these will need to be managed as required.

If surgery is required on both ears this will be staged due to the risks and complications associated with surgery.

Most dogs have much improved comfort levels following surgery due to chronic pain associated with severe ear disease. Surgery is a good option for cases of end-stage ear disease where medical management has failed.

If you have any questions about this information please raise them during your consultation with the vet.

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