



Veterinary Specialists of Alaska, P.C. Client Information Sheet: Total Ear Canal Ablation with Lateral Bulla Osteotomy (TECA-LBO)

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TECA – LBO is the surgical removal of the external ear canal followed by opening of the bony chamber (the bulla) that houses the middle ear. Owing to the anatomy, this is a very challenging procedure that should only be performed by a surgeon with appropriate training and experience.

The most likely reason to perform such a procedure is to treat end-stage inflammatory ear disease in the dog. The cocker spaniel suffers this disorder more than other dogs, but any breed can be affected. Chronic inflammatory ear disease is invariably related to allergic skin disease. Therefore, if there is any hope of saving the ear canals, a board-certified veterinary dermatologist will have the greatest chance. In those cases in which medical therapy has failed to resolve the problem and/or the ear canals have ossified (turned to bone secondary to the inflammation), a TECA – LBO is warranted.

Dogs and cats can also develop tumors within or next to the ear canal. Depending upon the nature of the tumor (benign vs. malignant) and its invasiveness, an ear canal ablation could be necessary in order to remove all of the tumor.



Typical appearance of “end-stage” ear.
Note severe obstruction of the ear canal.

The Surgery: An incision is made around the opening of the ear canal and through the cartilage. The canal is carefully separated from the surrounding tissues all the way to the level of the skull. The canal is amputated at the level of the skull. Using special instrumentation, the bulla is opened. In most instances, the internal lining of the bulla is thickened and the bulla is filled with puss. The lining tissue and puss are excised. The surgery site is flushed generously with sterile saline solution and the surgery site is closed with suture material. It is important to understand that in most cases the pinna (floppy part of the ear) is not removed. Thus, the cosmetic result following surgery is favorable.



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Post-Operative Care: For 2 weeks following surgery, activity should be limited to brief leash walks for urination and defecation. It is not uncommon for there to be moderate swelling of the surgical site after surgery. The application of warm, moist compresses help reduce the swelling over time. Appropriate pain management is critical in these patients as it is in all patients undergoing surgery. Analgesic (anti-pain) medications are administered before, during and for 2 weeks following surgery. Our analgesic protocol is tailored to the individual and involves a combination of safe, effective local and systemic analgesics that help these patients come through this procedure as comfortably as possible. Skin suture removal: These patients should be returned to Veterinary Specialists of Alaska, P.C. for skin suture removal 2 weeks post-operatively.

Potential Complications: NOTE: This is a challenging procedure with the potential for a variety of complications. However, the patients requiring this procedure are very painful. Therefore, the benefits of this procedure clearly outweigh the risks.

Facial nerve paralysis (common complication with a positive outlook): The facial nerve controls the muscles that allow the individual to blink and move the upper lip. It courses right under the ear canal next to the skull. In some patients that have ossified ear canals, it can be incorporated in that bone. In every case, the nerve must be retracted to permit removal of the canal and opening of the bulla. The retraction of the nerve can cause inflammation that may or may not lead to dysfunction. In most cases the dysfunction is temporary and normalcy returns within 2-4 weeks. However, it can be permanent.

Intra-Operative Hemorrhage (uncommon complication with a positive outlook): A branch of the carotid artery courses near the external ear canal of the dog. If this vessel is lacerated intra-operatively, bleeding can be so extensive that the surgery cannot be continued. If that occurs, the bleeding vessel is packed off, the patient is recovered from anesthesia and surgery will have to be completed another day.

Head Tilt (uncommon complication with a positive outlook): The balance center is closely associated with the middle ear. When this region becomes inflamed secondary to the trauma of the surgery and/or the extension of infection or invasion by a tumor, it can give the patient the sensation of vertigo. That is, the patient does not know which way is up. To compensate, the head may be turned toward the affected side. Just as is the case with facial nerve paralysis, this complication is generally temporary and improves within 2-4 weeks. However, it can be permanent.

Abscess Formation (uncommon complication with a positive outlook): An abscess in a pocket of puss. Because these ears are severely infected prior to surgery, it is possible that bacteria will enter the surgery site and proliferate ultimately resulting in the formation of puss and an abscess that must be lanced and drained. In most instances, the abscess will resolve with appropriate therapy.

Draining Tract (rare complication with an uncertain outcome): A draining tract generally results from the presence of a piece of the tissue lining the middle ear. It can potentially occur up to two years following surgery. The treatment is to return to the operating table and look for that abnormal remnant of tissue.

Hearing loss: It is difficult to document the extent of hearing loss. For most patients, their ear disease is so chronic and extensive that their hearing has been abnormal for years. Some clients have commented that they thought their dogs could hear better after surgery. It is not likely that this procedure improved the hearing of those patients. However, because of the elimination of the pain associated with end-stage ear disease, those dogs likely were able to focus on other things such as sensing deep auditory stimuli.

Prognosis: The prognosis following this procedure is good-to-excellent if it is performed properly. This is an excellent procedure for patients with chronically painful ears. In a matter of days, unrelenting discomfort and odor can be eliminated. This procedure carries with it one of the highest client-satisfaction ratings of all procedures performed at this hospital. This is because patients do so well following surgery.