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End Stage Ear Disease A Surgical Philosophy

- Chronic ear canal infections can be insidious and progress slowly towards end stage ear disease even with seemingly aggressive and appropriate medical therapy.
- This is especially true with dogs that have predisposing systemic (dermatologic) disease such as seborrhea, pyoderma, hypothyroidism or atrophy.
- The breed that presents the greatest challenge is the Cocker Spaniel.
- If the underlying skin predisposition is there, the environment for bacterial colonization of the ear canal is always present.
- Clinical flaring of the ear infection can be appropriately treated and suppressed, but the underlying predisposition is still present and the infection relapses
- Infection, after a quiescent period, can start again.
- Aggressive treatment of the underlying dermatological condition can help to slow relapses and minimize their severity, but it is very hard, if not impossible, to eliminate them.
- Early recognition of the underlying predisposition and early surgical intervention give the best chance of saving ears that are so affected.
- In a cocker spaniel or any breed that presents with repeated bouts of otitis externa early in life and it is determined that dermatologic skin issues are present, **lateral ear canal resection** should be considered early to help control the predisposition to infection.
- This approach should be considered **before** evidence of proliferative ear canal epithelium is present.
- The surgery provides the benefit of ventilation, drainage, and ease of treatment. You can be sure that medication gets to the horizontal ear canal where it is needed.
- The surgery itself cures nothing. It helps with treatment.
- The procedure with appropriate medical therapy slows (if not stops) the repeated infection problems and alters (if not stops) the progression of the development of proliferative epithelial changes that so characterize the condition.

- Once the proliferative changes in the canal epithelium have begun to appear, it is too late for this surgery to have benefit. The lateral ear resection will not prevent the slow progression of proliferative changes and the eventual closure of the horizontal canal.
- Systemic and topical medication cannot reach deep into the proliferative tissue to alter the inflammatory issues present.
- These ears will eventually close.
- The middle ear will secondarily become involved.
- I feel strongly that once proliferative changes have begun, the ear canal will eventually require a total ear canal ablation (TECA) with a lateral bulla osteotomy (LBO).
- Ear canals that have significant ear canal proliferation, ear cartilage ossification, no tympanic membrane have the bulla filled with exudates and debris.
- The animal has significant hearing deficit. The owner may or may not recognize this.
- If bilateral disease is present I often am able to draw from them the realization that there dog has significant if not total hearing loss.
- These ears can be treated with every antibacterial and anti-inflammatory drug known to mankind and it will not help. This problem has progressed to a surgical issue.
- At this point the only recourse is **TECA** with an **LBO**.
- This procedure is not without complications (deafness, facial nerve paralysis, deep recurring abscessation) and the owner should be advised about the possible problems.
- These are all technical surgical issues and can be prevented.
- The relief of the infection and pain the animal has been experiencing far outweighs the low incidence of complications that has been reported.
- The owners always report that they have a new dog after the surgery. The relief of pain alone improves the attitude of the animal.
- The animal must be considered deaf after the surgery and should always be fenced in or on a leash when out. Owners report however that the animal functions very well in the household and often responds to voice and other external sound stimuli. This suggests that sound vibrations do stimulate the inner ear probably transmitted through the bone of the skull.
- The ear canal ablation may not be able to remove all of the proliferative tissue that is present on the medial surface of the pinna. This is a problem in only a few of the ears that receive surgery.
- Leaving this present on the pinna can leave the dog and the owner with continued therapy issues that are not desirable. Removing this tissue can be done using electrosurgery.
- It prolongs the healing process but provides permanent relief in the longer term. Removing the proliferative tissue on the inner pinna down to the auricular cartilage and allowing this exposed cartilage to epithelialize from the edges will take time but will be worth the effort.
- Suturing the ears (pinnas) over the top of the head during the healing of this surgery is often beneficial since head shaking is a very common issue.
- This prevents the ears from flopping during head shaking.
- Finally I must make a comment about facial nerve paralysis. Much concern is expressed about this as a major complication to this surgery. My experience is that it occurs temporarily in 50% of the ears I operate on.

- One in four to five patients that I operate on will have a permanent facial paralysis. The interesting thing is that if it does occur, it is a non clinical issue for all dogs. The third eye lid works for moisture and the animals attitude (lack of pain-puppy again) removes the issue from the owners mind.
- This procedure is very rewarding for the surgeon and very gratifying for the owner and dog.