



7 Steps To Ear Therapy

Step 1.

Using DermaPet MalAcetic Otic to clean the ear thoroughly (see instructions) daily for 7-14 days. (Gotthelf L and Young S: *A New Treatment for Canine Otitis Externa: Vet Forum, August, 1997 see article*). In many cases, daily cleansing for one week is all that is necessary. **Maintenance** cleansing twice weekly should prevent a recurrence. If cutaneous* Malassezia is not suspected then use MalAcetic products topically, ie (shampoo, conditioner, or wet wipes - see shampoo therapy).

How to clean an ear:

Apply approximately one (1) teaspoon (5 ml) of the MalAcetic Otic into the ear canal and massage thoroughly. Some people occlude the canal with a small amount of cotton during this process to protect against drenching should the pet shake its head. For maximum benefit, allow the solution to remain for at least five minutes before attempting to manually clean. Clean the ear by stuffing wads or balls of cotton in the ear and massaging so the debris sticks to the cotton. An applicator stick may be of assistance where repetitive cleaning is required. In dry and/or irritated ears with little debris and/or wax, the cotton may become irritating. In these cases, a tiny bulb or a water pick can be helpful.

In problem ears, the frequency of this process may be increased to one (1) to three (3) times daily. *Should medication be necessary*, apply after cleaning. A previously little known fact to remember is that with most acidifying ear cleaners, the ear will be acidified and therefore may inactivate some commonly used drugs like aminoglycosides (amikacin, gentamycin). In those cases, either waiting four hours or applying alkalinizing agents will be of assistance. One alkalinizing agent that the literature reports to have primary antimicrobial properties is TrizEDTA (TrizEDTA™, DermaPet, Inc, Potomac, MD 20854). To use TrizEDTA, one should follow the above instructions in how to clean an ear only substituting the alkalinizing TrizEDTA solution. Repeating Steps 3 and 4 should then be more rewarding.

Step 2. Use MalAcetic HC

Step 2A Use MalAcetic HC for inflamed irritated ears. Step 2B once daily, plus treat twice daily with the "Gemish". The "Gemish" is:

"Gemish 1"
<p>12 ml of DermaPet MalAcetic Otic or TrizEDTA</p> <p>* 6 mg of dexamethasone sodium phosphate (DSP)</p> <p>a. Some people add .5-1 ml of medical grade DMSO</p> <p>b. Some people add ivermectin for a topical treatment.</p> <p>* If using MalAcetic HC, there is no need for DSP.</p>

Step 3.

The logical next step after cleansing and a "topical" such as the "Gemish" fail to cause remission of signs. Follow Step 2 plus add short term and short acting corticosteroids at anti-inflammatory doses.

Step 4.

Step 3 plus ear cleansing under anesthesia. Visualization of the ruptured ear drum or swollen tympanum should confirm otitis media. After careful and thorough cleansing and removal of "debris", infuse Baytril or appropriate antibiotic and dexamethasone** directly into the tympanum. In the case of a strangulated canal, with a 1 1/2 inch 20 gauge needle, inject approximately 1/2 ml of depomedrol (depending on the size of the pet) as deep as you can between the skin and the cartilage of the ear canal. If a corticosteroid injection is not done then, if there is significant erythema or exudation, then place the dog on short term (7-12 days) short acting corticosteroids. At this stage, some people do culture sensitivity.

Step 5.

Step 4 plus Culture and sensitivity.

Step 6 - Protocol for Bacterial Otitis.

The following treatment plan which is a modification of Step Four (see Seven Steps to Treating Ears in the DermaPet folder on VIN or at my website <http://www.dermapet.com>)

1. Flouroquinolone or start antibiotic which cultures sensitive systemically for at least 21 days. Recently experts decreased the importance of the systems verses topical antibiotics.
2. * Clean with TrizEDTA twice daily.
3. *Instill Baytril in either a **TrizEDTA gemish (12ml of TrizEDTA and 50-100 mg of Baytril injectable)** or diluted with saline. For first three weeks add 6mg dexamethasone SP.
4. For the first 14 days, I would use systemic prednisone at 1-2 mg/kg if OM is diagnosed. The rationale is to decrease the inflammation, mucous secretion from the mucoperiosteum, pain and viscosity of the exudate in the tympanic cavity.
5. If OM is diagnosed, I would anesthetize and with visualization flush the ear with TrizEDTA and directly instill Baytril and DSP into the tympanum. If the tympanum is present and OM is suspected then I would do a MYRINGOTOMY. The location of the myringotomy should be ventral. Maintenance therapy would include biweekly TrizEDTA cleansing long-term.

"Gemish 2"
<p>*Instead of 6.2 and 6.3: Add 600 to 1200 mg Baytril LA (5% to 10% solution) and 4oz TrizEDTA. Use .5-2ml in each ear/BID or until it fills the ear.</p>

Step 7.

Surgery. This is if Step 4 fails and/or calcification of the ear canal is evident.

- There is no simple method of diagnosing cutaneous Malassezia. Do a topical treatment in cases where Malassezia otitis is confirmed by cytology.
- The use of corticosteroids is multifunctional. While we are most familiar with it's anti inflammatory properties, in the case of OM, the reduction in the viscosity of the tympanic exudate is a noteworthy goal.
- There are reports in the literature of primary microbiocidal properties of TrizEDTA, particularly to Pseudomonas. Those reports also indicate the evidence for potentiation with antibiotics which otherwise are inactivated by other acidifying ear cleansers.