

Treating Otitis in 3 Step

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- I. Cleaning Ears (usually not essential)
 - A. Moderate to severe exudate with either wax or wet-pus itchy or even painful with ulcers
 - B. Cleaning should be performed in the clinic
 1. Prevents the owners from being overwhelmed with treatments
 2. Trying to clean at home dilutes the medication-treatments
 - C. Technique
 1. Do not use products with acids or alcohols
 2. Try not to use herbal products like tea-tree or eucalyptus
 3. Virbac - EpiOtic Advanced is an excellent "safe" product
 4. Use fluid and flushing-suction action to clean
 - a) Fill ear canal completely - massage - let shake dry
 - b) Use 4 oz bottle as single use "bulb-syringe" for flushing/suction
 - c) Make sure not to "cork" seal the ear canal creating excessive pressure
 - d) Repeat until clean canal
 - e) Very difficult if not impossible to completely dry if TX w/ Claro/Osurnia
- II. **Otitis with Waxy Exudate (99% of otitis) (sterile +/- yeast +/- Staph bacteria)**
 - A. Red, itchy, head-shaking symptoms with mild-severe wax
 - B. Tympanic Membrane is almost ALWAYS intact (*forced exam not essential*)
 - C. Can be STERILE otitis caused by allergy inflammation or yeast or Staph
 - D. Always secondary to primary-root-underlying disorder (allergy/endocrine/mites/tumor/etc)
 - E. Mild non-infected otitis will eventually become infected if not prevented
 - F. Ototoxicity is very rare
 - a) 1/10,000 treatments and unpredictable
 - b) Ruptured eardrum TM does not necessarily increase risk
 - c) Having infection is just as risky as medication treatments
 - d) Medications normally diffuse through intact TM
 - e) Treatments options are the same regardless of TM being intact or ruptured
 - G. **Multi-Modal TRIAD treatment options - all have antibiotic + antiYeast + steroid**
using products with single ingredient often fail due to shifting infections
 1. **Short-Acting Triad products**
 - a) Many-Many brands and almost all mineral oil base
 - (1) Oil vehicle will dissolve wax and clean ear without liquid/fluid cleaners
 - (2) Adding a cleaning step dilutes medication and decreases compliance
 - (3) Ointment administered before swimming or bath will "water-proof"
 - b) Labeled as every 12-24 hours but actually last for 24-72 hours
 - c) Make sure volume is adequate
 - (a) counting drops is bad - use dose-syringe or pump bottle
 - (b) .5ml for cats & small dogs // 1ml for 20-80lbs // 1.5ml for >80lbs

2. Long-Acting TRIAD products

- a) Few brands and compounded products
- b) Long-Acting vehicle produce 1 to 4 week effective duration
- c) MUST be administered into a DRY ear canal
 - (1) FDA approved Claro and Osurnia (2023)
 - (a) Almost identical products with 2-4 week effective duration
 - (b) Ear canal must be clean and DRY
 - (2) Compounded Oti-Pak Lanolin ointment base with 1 to 4 week duration
 - (a) Must be warmed to soften ointment
 - (b) WILL dissolve wax and has “self-Cleaning” effect
 - (c) Ointment administered before swimming or bath will “water-proof”

3. Prevention Treatments

- a) ALL OTITIS PATIENTS WILL NEED LONG-TERM PREVENTION THERAPY
 - (1) Otitis is ALWAYS secondary to underlying-primary disorder
 - (a) Treat the allergies and endocrine imbalance
 - (b) Water-proof the ear before swimming
 - (c) Remove the tumors/cysts
 - (2) 3 Prevention therapy options
 - (a) Use the TRIAD product used to treat the Otitis as prevention
 - i) Short-Acting products can be administered every 3-7 days
 - ii) Long-Acting products can be administered every 2-4 weeks
 - iii) Ear “Cleaner/Flush/Drying” products can be used every 1-7 days

III. Severe Otitis with Wet Pus Exudate and painful ulcers (rare and 1% of otitis)

- A. Eardrum TM is almost always ruptured (*forced exam is not essential*)
- B. Wet-Pus covers the TM making visualization difficult or impossible
- C. Cultures always identify multiple organisms (Pseudomonas/Proteus/Staph/Yeast/etc)
- D. Bacteria is resistant to almost all antibiotics
 - 1. Culture sensitivities are based on oral dosing of antibiotics not topicals
 - 2. Oral antibiotics do not reach sufficient concentrations in the ear canal
 - 3. Topical HIGH-concentration antibiotic solutions overwhelm the bacteria
 - 4. Pus and WBC and bacteria are potentially ototoxic
 - 5. TrisEDTA + Ketoconazole + enrofloxacin solutions are historically safer
- E. Resistant severe infections with Pseudomonas
 - 1. ARE NOT caused by multi-modal TRIAD products
 - 2. ARE NOT caused by long-term prevention therapy
 - 3. ARE caused by **not treating** the underlying-primary disorder
 - 4. ARE caused by multiple treat-and-stop cycles
- F. Treatment is usually 95% effective in 2-3 weeks
 - 1. Tris-EDTA solution with ketoconazole
 - 2. Add 1000mg of injectable enrofloxacin per 4oz solution
 - 3. OK to add 40mg of Dexamethasone SP per 4oz solution
 - 4. Fill the ear canal completely every 12-24 hours
 - 5. **MUST then transition to prevention treatments and control primary disorder**
 - 6. If recurrent or too painful - consider culture-guided treatment or TECA