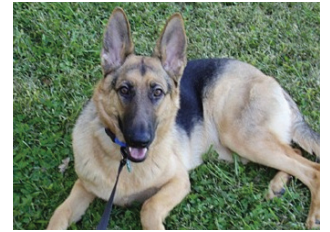


"ROSIE" 2 YEAR OLD DE-SEXED FEMALE GERMAN SHEPHERD

By: Kirsten Hailstone – Wellington Rd Veterinary Surgery



EAR PROBLEM 2 MONTHS DURATION

- Following general anaesthetic (GA) and ear flush, within 36 hrs ataxic and vomiting.
- Apparently deaf.
- On NSAIDs and Clavulox. Ataxia resolved, apparently deaf.

DAY 1

- Inflammation left pinna and external auditory meatus
- Left and right eardrums visible, partially obscured, normal exudate, larger than normal quantity
- No head tilt. Pinnae erect, minimal soreness

Plan: GA clean and radiograph bullae

DAY 14

GA

- Right: erythematous scar tissue across drum
- Left: (as for Right: above)
- X-rays showed increased radiodensity right tympanic bulla

Plan: Myringotomy & antibiotics based on C&S or ventral bulla osteotomy

DAY 40

History:

- Left ear inflamed and discharging.

Examination:

- Right – clear
- Left – thick white cheesy sweet smelling material
- Left drum discharge covered
- Right drum intact. Myringotomy: thin brown fluid exuded, cheesy and fleshy material extracted

Laboratory:

- 1+ cocci 1+ yeast 2+ rods left canal

Treatment:

- C&S;

- Left canal
- Right canal
- Right myringotomy
- Initiated therapy: left canal
- TRIZ EDTA sid 30 mins prior to Baytril Otic
- Baytril Otic bid left ear only
- Enrofloxacin 5mg/kg sid for 28 days PO
- review with C&S results

DAY 47

- C&S light and moderate growths of *S.intermedius* left external canal and right myringotomy
- Right canal no growth
- Review: dog improving, therapy was maintained

DAY 70

History:

- Hearing improved
- Nil treatment since yesterday
- Oral antibiotics stopped day 68

Examination:

- Clean normal canals
- Drums covered in topical medication cannot evaluate

Plan: Nil therapy, 2 weeks review

DAY 84

- Canals clear, dog comfortable

FURTHER TREATMENTS

- 3months later relapsed.
- Right ventral bulla osteotomy performed.
- Granular material removed. Repeat culture and sensitivity: no growth.
- Management: Bayer Clean ear and dexamethasone topically for allergic otitis.
- Result: two minor infections in 4 years since.

NOTES ON ANTIMICROBIAL THERAPY: ROSIE THE GERMAN SHEPHERD



SELECTION OF THE ANTIMICROBIAL:

Enrofloxacin (Baytril) is a concentration dependent antimicrobial with excellent activity against *Staph. intermedius*. Efficacy depends on the **level achieved** above the Minimum Inhibitory Concentration (MIC) of the pathogen, not the **time** above the MIC.

DOSE SELECTION:

The standard dose rate of 5mg/kg Enrofloxacin has been selected for this case due to the therapeutic levels achieved in the dog and the MIC values for the pathogen. Baytril is effective against more than 95% of *S. intermedius* strains at a level of $\leq 0.25 \mu\text{g/ml}$ while C_{max} is $> 2.0 \mu\text{g/ml}$ when administered at 5mg/kg daily. So the **peak level achieved** is above the MIC required for efficacy by at least a factor of 4.

ADDITIONAL TOPICAL THERAPY:

Many cases of otitis externa alone are characterised by thickening of the ear canal tissue. Systemic antimicrobials may have difficulty localising out to the surface layers of the skin so the addition of topical Enrofloxacin plus Silver Sulphadiazine (Baytril Otic) ensures maximum exposure of the pathogen to the therapeutic agent. As this case is complicated by the involvement of the right inner ear (as shown by the myringotomy) systemic and topical antibiotic therapy is essential.

DURATION OF THERAPY:

Chronic and complicated otitis, especially with inner ear involvement, requires an extension in the duration of therapy – in this case, 28 days. Systemic Enrofloxacin, for extended periods, is well tolerated in the dog.

BAYTRIL:

- Has excellent tissue penetration in skin, reaching therapeutic levels as early as 3 hours after oral administration
- Is highly lipophilic, allowing it to pass through fibrous tissue, scar tissue, pus and inflammatory debris to reach the site of infection
- Accumulates in white blood cells which means:
 - It's directly and selectively carried to the infection site
 - Tissue penetration is enhanced

Baytril Otic (the only fluoroquinolone approved for topical treatment of canine otitis externa):

- Is non ototoxic
- Is flexible, in that it can be used with or without a steroid
- Has broad dual antibacterial and antimycotic spectrum

Baytril and Baytril Otic – the ideal combination for the systemic and topical treatment of ear infections.

