**Australian Veterinary Prescribing Guidelines – Dogs and Cats**

**Developed by the University of Melbourne**

For more information and further resources visit

**www.fvas.unimelb.edu.au/vetantibiotics**

The information provided sets out prescribing guidelines for your clinic and its commitment to antimicrobial stewardship. Designed for your practice to provide prescribing guidelines with space for your clinic to develop and document antibiotic use policies.

**Clinic Stewardship Champion:** (Blank space for writing)…………………………….

**SURGERY**

**CLEAN SURGERY, NO MITIGATING FACTORS**

* **FIRST LINE: NONE.**
* **MITIGATING FACTORS:** Amoxycillin or 1st generation cephalosporin.
* **MITIGATING FACTORS:**
	+ Hypotension.
	+ Surgical duration >90 mins.
	+ Obese dogs.
	+ Endocrine disorder.
	+ Bacterial dermatitis.
	+ Surgery involves implant.
* **DURATION OF THERAPY:** Stop within 24 hours (except dermatitis – treat until cured).

**CLEAN CONTAMINATED SURGERY**

* Enterotomy, cystotomy, etc.
* **FIRST LINE:** Amoxycillin or 1st generation cephalosporin.
* **DURATION OF THERAPY:** Stop within 24 hours.

**CONTAMINATED SURGERY**

* Pyometra, prostatic abscess, significant bowel leakage.
* **FIRST LINE:** Amoxycillin or 1st generation cephalosporin and gentamicin and metronidazole.
* **DURATION OF THERAPY:** No evidence, 24-48 hours is common in human medicine.

**DIRTY SURGERY**

* Use antimicrobial appropriate for infection (ideally based on culture and sensitivity) and treat until cured.

**TIMING IV ANTIMICROBIALS**

* 30-60 mins prior to surgery, repeat cefazolin every 4 hours, amoxycillinevery 2 hours.
* SC antimicrobials 2 hours prior to surgery.

**CLINIC POLICY**

* **CLEAN:** (Blank space for writing)…………………………………………………..
* **CLEAN CONTAMINATED:** (Blank space for writing)…………………………….
* **CONTAMINATED:** (Blank space for writing)………………………………………

**DENTAL SURGERY**

**ROUTINE DENTALS:** NO ANTIMICROBIALS

**DENTALS WITH EXTRACTIONS:**

* Bacteraemia expected for approximately 20 mins.
* Prophylactic antimicrobials only in patients that can not tolerate transient bacteraemia (~20 mins). Recommended for:
	+ Immunosuppressed.
	+ Geriatrics.
	+ Patients with severe heart disease.
	+ Patients with systemic illness.
* **FIRST LINE:** Amoxycillin IV 30 mins (2 hours if IM/SC) prior to surgery, or clindamycin.
* **DURATION OF THERAPY:** One dose only or 2nd dose 6 hours later.

**CLINIC POLICY**

* **FIRST LINE:** (Blank space for writing)……………………………………………
* **SECOND LINE:** (Blank space for writing)………………………………………..

**ACUTE GASTROENTERITIS**

**TREATMENT**

* Antimicrobials only when signs of sepsis or confirmation of specific bacterial enteropathogens.
* **FIRST LINE:** NONE.
* **SPECIFIC CLOSTRIDIAL ENTEROPATHOGENS:** Metronidazole.
* **SEPSIS:** Amoxycillin + gentamicin + metronidazole.

**CLINIC POLICY**

* **FIRST LINE:** (Blank space for writing)……………………………………………
* **SECOND LINE:** (Blank space for writing)………………………………………..

**UPPER RESPIRATORY DISEAS**

**FELINE RHINITIS ≤ 10 days**

* Limited benefit of cytology or culture & susceptibility testing.
* **SEROUS DISCHARGE:** NONE.
* **MUCOPURULENT OR PURULENT BUT SYSTEMICALLY WELL:** NONE.
* **MUCOPURULENT OR PURULENT BUT SYSTEMICALLY UNWELL:** Doxycycline.
* **DURATION OF THERAPY:** 7-10 days.

**FELINE RHINITIS > 10 days**

* Antimicrobials should be selected based on culture and susceptibility testing.
* No evidence that 3rd generation cephalosporins or fluoroquinolones are more effective than doxycycline or amoxycillin.
* **DURATION OF THERAPY:** Up to 1 week past resolution of clinical signs.
* **CLINIC POLICY**
	+ **ACUTE RHINITIS:** (Blank space for writing)………………………………
	+ **CHRONIC RHINITIS:** (Blank space for writing)……………………………

**CANINE INFECTIOUS RESPIRATORY DISEASE COMPLEX**

* Interpreting cytology and culture and susceptibility testing difficult.
* **NO EVIDENCE OF PNEUMONIA & SYSTEMICALLY WELL:** NONE.
* **NO EVIDENCE OF PNEUMONIA & SYSTEMICALLY UNWELL:** Doxycycline or amoxycillin.
* **DURATION OF THERAPY:** 7-10 days.
* Usually responds quickly, consider further work-up if poor response.
* **CLINIC POLICY**
	+ **FIRST LINE:** (Blank space for writing)……………………………………
	+ **SECOND LINE:** (Blank space for writing)………………………………..

**OTITIS EXTERNA**

**DIAGNOSTICS**

* Cytological evaluation should always be performed to identify pathogens and inflammatory cells.
* Culture and susceptibility testing should be performed when:
	+ Rods are present on cytology.
	+ Lack of response to antimicrobial therapy.
	+ Chronic otitis.
* Ensure tympanic membrane is intact, ear flushing under GA may be necessary.
* *Collect specimens before flushing.*
* *If recurrent underlying disease should be investigated (foreign body, atopy, anatomical anomaly).*

**TREATMENT**

* Ear flushing (under GA if necessary): warm sterile saline under controlled pressure.
* **FIRST LINE: *Cocci only OR cocci & rods:***
	+ **Intact tympanic membrane:** ear flushing, topical therapy with fucidic acid and framycetin combination or gentamicin.
	+ **Perforated tympanic membrane:** ear flushing and non-ototoxic cleaners, avoid topical antimicrobials.
* **DURATION OF THERAPY:** 10-14 days.
* ***Rods only:***
	+ **Intact tympanic membrane:** ear flushing, topical therapy with polymixin B, gentamicin or marbofloxacin.
	+ **Perforated tympanic membrane:** ear flushing and non-ototoxic cleaners, avoid topical antimicrobials.
* **DURATION OF THERAPY:** 10-14 days.
* Systemic antimicrobials – often ineffective and usually only indicated when middle or inner ear is involved. Base therapy on culture and susceptibility.
* *Non-ototoxic agents: chlorhexidine, Tris-EDTA.*
* *Ototoxic agents: polymixin B, aminoglycosides.*
* *Less ototoxic agents: fluoroquinolones (marbofloxacin, ciprofloxacin).*

**CLINIC POLICY**

* **FIRST LINE:** (Blank space for writing)……………………………………………..
* **SECOND LINE:** (Blank space for writing)………………………………………….

**PNEUMONIA**

**DIAGNOSTICS**

* Tracheal for cytology and culture & susceptibility testing is strongly recommended prior to antimicrobial therapy.
* *Consider underlying disease process that predisposed to pneumonia.*
* *Consult with microbiologist to interpret results (airway contaminants possible).*

**TREATMENT**

* **FIRST LINE: Mild:** Doxycycline.
* **MILD ASPIRATION:** No treatment or amoxycillin or 1st generation cephalosporin.
* **PNEUMONIA & SEPSIS:** Enrofloxacin and amoxycillin pending culture and susceptibility results. Consider metronidazole or clindamycin if anaerobes are suspected.
* **DURATION OF THERAPY:** Review after 10-14 days.

**CLINIC POLICY**

* **MILD:** (Blank space for writing)…………………………………………………….
* **MILD ASPIRATION:** (Blank space for writing)……………………………………
* **PNEUMONIA & SEPSIS:** (Blank space for writing)………………………………

**PYODERMA**

**DIAGNOSTICS**

* Cytological evaluation is needed to identify the existence of a bacterial pyoderma.
* Use adhesive tape, direct smear, or FNA (for pustules or nodules).
* Culture and susceptibility testing recommended in all cases of bacterial pyoderma in which systemic antimicrobials are being considered.
* Also strongly encouraged when:
	+ Rods are present on cytology.
	+ Lack of response to antimicrobial therapy.
	+ New lesions develop during treatment.
	+ Chronic or recurrent pyoderma.
* *Consider underlying disease.*

**TREATMENT**

* Surface, superficial, and localised deep pyoderma.
* **FIRST LINE:** Topical antiseptic shampoo treatment, allow contact with skin for 5-10 mins.
* **SYSTEMIC ANTIMICROBIALS:** In cases where large areas of body affected or when hair follicles and surrounding skin involved: 1st generation cephalosporins or amoxycillin/clavulanate.
* Chlorhexidine shampoo twice weekly and chlorhexidine spray daily is comparable to amoxycillin/clavulanate.
* Re-evaluate <3 weeks and before end of treatment course.

**CLINIC POLICY**

* **FIRST LINE:** (Blank space for writing)……………………………………………
* **SECOND LINE:** (Blank space for writing)………………………………………..

**ACUTE HAEMORRHAGIC DIARRHOEA**

**3 CATEGORIES**

1. Mild bloody diarrhoea, normovolaemic and systemically well.

2. Severe bloody diarrhoea with hypovolaemia but not septic.

3. Severe bloody diarrhoea with hypovolaemia and sepsis.

**FIRST LINE:**

**GROUP 1:** No antimicrobials.

**GROUP 2:** Fluid therapy and monitor for sepsis.

**GROUP 3:** Fluid therapy and amoxycillin + gentamicin + metronidazole.

**CLINIC POLICY**

**GROUP 1:** (Blank space for writing)………………………………………………………

**GROUP 2:** (Blank space for writing)………………………………………………………

**GROUP 3:** (Blank space for writing)………………………………………………………

**LOWER URINARY TRACT DISEASE**

**DIAGNOSTICS**

* Urinalysis and cytological evaluation of stained and unstained urine sediment.
* Culture and susceptibility testing recommended in all cases (collect via cystocentesis, refrigerate, culture within 24 hrs).
* *If complicated, consider underlying disease.*

**TREATMENT**

* **REMEMBER the majority of cats** (particularly young cats) with lower urinary tract signs **do not** have bacterial cystitis.

**INTACT MALE DOGS:** Cystitis rare, consider bacterial prostatitis**.**

**IDIOPATHIC CYSTITIS OF CATS:** No antimicrobial therapy.

**SPORADIC (UNCOMPLICATED) CYSTITIS IN DOGS AND CATS:**

* Amoxycillin or trimethoprim/sulphonamide (pending culture and susceptibility testing).
* **DURATION OF THERAPY:** 3-5 days.
* Should respond in 48h, further investigation if not responding.
* DO NOT change antimicrobials empirically.
* If responding to therapy and culture results indicate resistance, don’t change antimicrobials.
* Urine culture should NOT be performed after resolution of clinical signs.

**RECURRENT (COMPLICATED) CYSTITIS IN DOGS AND CATS:**

* Amoxycillin or trimethoprim/sulphonamide (pending culture and susceptibility testing). Consider work-up for co-morbidities.
* **DURATION OF THERAPY:** Goal is for clinical cure NOT microbiological cure.
* If reinfection, 3-5 days based on susceptibility testing.
* If persistent relapsing infections or urinary tract abnormalities 7-14 days.
* See website for indications for re-culture.
* *Side effects can occur with long term trimethoprim/sulphonamide.*
* *No evidence to support use of antimicrobials before, during or after removal of an indwelling urinary catheter in dogs or cats. Studies suggest this may promote resistance. Culture urine before starting treatment.*

**CLINIC POLICY**

* **FIRST LINE:** (Blank space for writing)……………………………………………
* **SECOND LINE:** (Blank space for writing)………………………………………..

**CELLULITIS, ABSCESS & TRAUMATIC WOUNDS**

**DIAGNOSTICS**

* History, clinical presentation & cytology.
* Culture and susceptibility testing recommended when: Lack of response to antimicrobial therapy.
* *If doesn’t respond consider underlying disease.*

**TREATMENT**

* **FIRST LINE:** Draining & flushing alone.
* Systemic antimicrobials only when:
	+ Systemically unwell.
	+ Diffuse tissue involvement.
	+ Potential joint involvement.
	+ Immunosuppressed patient.
* **DURATION OF THERAPY:** Amoxycillin or ampicillin for 5-10 days.

**CLINIC POLICY**

* **FIRST LINE:** (Blank space for writing)……………………………………………
* **SECOND LINE:** (Blank space for writing)………………………………………..

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