

FECAVA Recommendations for Appropriate Antimicrobial Therapy



Body system	SKIN					RESPIRATORY				UROGENITAL			ORAL	GASTRO-ENTERIC		ABDOMINAL		BLOOD	ORTHOPAEDIC	
	Upper					Lower														
	Coat care, thermoregulation, sterilisation of grooming equipment mandatory																			
Common conditions	Surface pyoderma (microbial overgrowth, fold pyoderma, acute moist dermatitis)	Superficial pyoderma (bacterial folliculitis, impetigo)	Deep pyoderma (furunculosis, cellulitis)	Otitis externa	Wound/soft tissue infections and abscesses	Rhinitis	Acute bronchitis (e.g. kennel cough) Chronic Bronchitis	Pneumonia	Pyothorax	Upper urinary tract infection (pyelonephritis)	Lower urinary tract infection	Pyometra	Oral infection (e.g. gingivitis, stomatitis, periodontitis)	Gastroenteritis	Anal gland abscessation	Hepatic disease (cholecystitis, cholangitis, cholangiohepatitis)	Peritonitis	Sepsis	Septic arthritis	Osteomyelitis
Cytology and culture	from impression smears, tape strips	& from pustule (if possible)	& following biopsy or by aspiration (not from surface exudate)	of ear swabs obtained after preliminary cleaning not relevant due to topical therapy	impression smears for surveillance of surgical site infections of if complications/suspicion of multi-resistant bacteria (e.g. MRSP, MRSA, ESBL)	Usually not indicated, limited clinical significance due to presence of commensal flora Samples collected by biopsy may be considered in chronic cases	Usually not indicated, limited clinical significance due to presence of commensal flora	Difficulties with bronchoalveolar lavage include patient stability and getting representative sample Differentiate on clinical/historical basis: life threatening disease vs animals with no symptoms and contact with other animals	& on aspirate by thoracocentesis (both aerobic and anaerobic incubation)	& of urine (collected by cystocentesis)	most cases (urine collected by cystocentesis)	Usually not indicated (unless rupture, see peritonitis)	Not indicated, limited clinical significance due to presence of commensal flora	Usually not indicated On specific suspicion submit for <i>Salmonella</i> <i>Campylobacter</i> (Speciation required) and toxigenic clostridia	& of wound cavity if severe tissue damage &/or fever (perform deep glandular swabbing to avoid contaminants)	& of aspirate or biopsy (gall bladder aspirate preferred under GA/sedation)	& of aspirate obtained by abdominocentesis (both aerobic & anaerobic incubation)	& minimum 3 aseptically taken blood samples taken over a 24-hour period (both aerobic and anaerobic incubation)	& of synovial aspirate or biopsy (synovial membrane). Before isolation and sensitivity testing incubate sample in blood culture medium for 24 h at 37° C	& of bone biopsy
Likely pathogen	<i>Staphylococcus pseudintermedius</i> / <i>Malassezia</i> sometimes involved)	<i>Staphylococcus pseudintermedius</i>	<i>Staphylococcus pseudintermedius</i>	Cocci (mainly <i>Staphylococcus pseudintermedius</i>), rods (mainly <i>Pseudomonas</i>), and/or yeasts (<i>Malassezia</i>)	Variable	Variable often viral +/- secondary opportunistic infection in cats Consider chronic causes of Chronic Bronchitis	Viral Consider chronic causes of Chronic Bronchitis	Variable Consider <i>Mycoplasma spp</i>	Variable, including anaerobes Consider <i>Mycoplasma spp</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	Variable (including anaerobes)	Dietary indiscretion or change most likely. Mainly viruses (or parasites in young animals). Faecal sample for parasitology on suspicion)	Variable, including anaerobes <i>E.coli</i> , <i>Enterococcus</i> and <i>Proteus</i> common	Variable for cholangitis/ cholangiohepatitis <i>E.coli</i> , <i>Enterococcus spp.</i> , <i>Strep. spp.</i> , anaerobes. occ. leptospirosis	Variable	Variable (including anaerobes)	Variable. If surgical (or secondary to surgery), probable <i>Staph pseudointermedius</i> infection	Variable. If surgical (or secondary to surgery), probable <i>Staph pseudointermedius</i> infection
Empirical antimicrobial choice	Avoid empirical choice if multiresistant bacteria (e.g. MRSP, MRSA, ESBL) possible Clindamycin or 1st generation cephalosporins or TMPS or amox/dav	pending	1st gen. cephalosporins or amox/clav while pending	Antiseptics often sufficient Topical treatments Utilise Cascade in ongoing cases Systemic therapy based on is indicated for infiltrative or emphysematous infection &/or fever	Cleansing and debridement coupled with modern wound dressings are usually sufficient. Antivirals e.g. famcyclovir useful for FHV-1 in cats	With secondary chronic purulent rhinitis consider doxycycline. Antivirals e.g. famcyclovir useful for FHV-1 in cats	In poorly responsive cases >10 days or secondary pneumonia suspect <i>Bordetella bronchiseptica</i>	Doxycycline orally (mild disease). Parenteral fluoroquinolone (severe symptoms)	If cocci use amox-clav, if rods use fluoroquinolones	TMPS or fluoroquinolone while pending If signs of systemic infection see sepsis	ONLY when inflammation and infection present on cytology i.e. septic neutrophils +/- intracellular bacteria Amoxicillin or TMPS while pending	In severe* cases use fluoroquinolones	Self-limiting If signs of systemic infection see sepsis	In severe tissue damage &/or fever use TMPS while pending ampicillin or Amox/clav in cats tx	Amox/clav, ampicillin pending Doxycycline or 1st gen. cephalosporins possibly fluoroquinolones for enterobacteria	Penicillin G or amoxicillin or ampicillin IV Also fluoroquinolones	Clindamycin, penicillin G, amoxicillin or ampicillin IV and fluoroquinolones	Clindamycin or 1st gen. cephalosporins or amoxclav	pending	
Remarks on therapy	Topical therapy with anti microbial shampoos, lotions, spray, gels, creams, etc e.g. chlorhexidine with adequate contact time (10 minutes)	Consider topical therapy alone (e.g. chlorhexidine) if infection is mild Treat until clinical resolution is observed at follow up consultation	Always combine with topical therapy (e.g. chlorhexidine shampoo) Treat until clinical signs have completely resolved at follow up consultation	Clean before therapy, & continue for prophylaxis. Reduce swelling & inflammation with glucocorticoids (can be curative) Investigate and resolve underlying causes. Consider systemic therapy with ulceration always take sample after wound cleaning Treat abscesses with curettage and drainage	If symptoms persist >10 days, consider systemic antibiotics Always address primary cause in chronic purulent rhinitis	If symptoms persist >10 days, consider systemic antibiotics Treat with doxycycline or TMPS or amox-clav 3 times daily 	Amoxicillin or ampicillin preferably as a constant rate infusion or 3 times daily orally In severe* cases use a fluoroquinolone & penicillin G or clindamycin	Drainage and lavage are essential for clinical resolution Amox-clav 3 times daily	Amox-clav 3 times daily	Amoxicillin 3 times daily 	Medical treatment (occasional, not recommended) 4-5 days fluoroquinolones (or TMPS) and e.g. aglepristone 	and/or dental treatment If signs of systemic infection (fever, lymphadenopathy) use clindamycin or metronidazole and spiramycin 	Some evidence for use of probiotics in acute GE-speeds recovery and targets intestinal dysbiosis Diet modification useful	Drainage and lavage Local instillation of antimicrobials Removal if recurrence		Correction of primary cause (if possible), copious lavage essential Amoxicillin or ampicillin preferably as a constant rate infusion or 3 times daily Treat underlying trigger aggressively, e.g. resection/drainage/lavage needed of e.g. wound/pyothorax	Amoxicillin or ampicillin preferably as a constant rate infusion or 3 times daily	Copious lavage (aseptic) of joint space with saline or Ringer's lactate Amoxicillin-clav 3 times daily	Look for primary cause Remove implants if possible 	

This table provides examples and should not be considered comprehensive. Local resistance patterns have to be taken into consideration. Use an antimicrobial with shown bioavailability at target organ and use as narrow spectrum as possible. Always follow national legislation.

= Cytology
 = Culture and antimicrobial susceptibility test

= Hospitalization recommended
 = Antimicrobial therapy not indicated

= Surgery
 = Consider referral to specialist

ESBL = Extended spectrum beta-lactamase
MRSA = Methicillin-resistant *Staphylococcus aureus*
MRSP = Methicillin-resistant *Staphylococcus pseudintermedius*
TMPS = Trimethoprim-sulfonamide
Severe* = Sign of sepsis