

FECAVA Recommendations for Appropriate Antimicrobial Therapy



FECAVA
Federation of European Companion Animal Veterinary Associations



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)	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	 impression smears for surveillance of surgical site infections if complications/suspicion of multi-resistant bacteria (e.g. MRSP, MRSA, ESBL)	Usually not indicated, limited clinical significance due to presence of commensal flora	Difficulties with bronchoalveolar lavage include patient stability and getting representative sample	 & 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 toxicogenic 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	 Radiography & 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	Viral Consider chronic causes of Chronic Bronchitis	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</i> spp., <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	1st gen. cephalosporins or amox/clav while pending	Antiseptics often sufficient Topical treatments Utilise Cascade in ongoing cases is indicated for infiltrative or emphysematous infection &/or fever	Cleansing and debridement coupled with modern wound dressings are usually sufficient. Systemic therapy based on	 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	ONLY when inflammation and infection present on cytology i.e. septic neutrophils +/- intracellular bacteria	 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	 Clindamycin, penicillin G, amoxicillin or ampicillin IV and fluoroquinolones	Clindamycin or 1st gen. cephalosporins while 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)	Clean before therapy, & continue for prophylaxis. Reduce swelling & inflammation with glucocorticoids (can be curative) Investigate and resolve underlying causes. Consider systemic therapy with ulceration	Topical antimicrobials are usually not recommended with granulating wounds If 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	 H	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	Amoxicillin 3 times daily Medical treatment (occasional, not recommended) 4-5 days fluoroquinolones (or TMPS) and e.g. aglepristone	 H	 and/or dental treatment If signs of systemic infection (fever, lymphadenopathy) use clindamycin or metronidazole and spiromycin	 R	Some evidence for use of probiotics in acute GE-speeds recovery and targets intestinal dysbiosis Diet modification useful	 H	 Drainage and lavage Local instillation of antimicrobials	 H	 Correction of primary cause (if possible), copious lavage essential Amoxicillin or ampicillin preferably as a constant rate infusion or 3 times daily	 H	Copious lavage (aseptic) of joint space with saline or Ringer's lactate Remove implants if possible

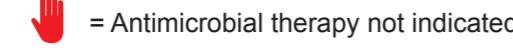
This table provides examples and should not be considered comprehensive. Local resistance patterns have to be taken into consideration. Use an antimicrobial with shown bioavailability at target organ and use as narrow spectrum as possible. Always follow national legislation.



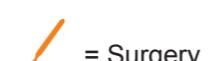
= Cytology



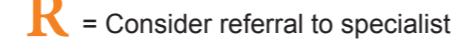
= Hospitalization recommended



= 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