ANIMA VETERINÁRNA NEMOCNICA ŽILINA

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OZNÁMENIE KOMISIE

Usmernenia k obozretnému používaniu antimiširobiálnych látok vo veterinárnej medicíne

(2015/C 299/04)

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Deaths attributable to AMR every year compared to other major causes of death

AMR in 2050

10 million
Rozsiahle používanie antimikrobiálnych látok v humánej a veterinárnej medicíne v posledných rokoch urýchli lo vznik a šírenie rezistentných mikroorganizmov. Situácia sa zhoršila z dôvodu nedostatočných investícií do vývoja nových účinných antibiotík. Závažnosť dôsledkov je zrejmá: odhaduje sa, že infekcie rezistentné voči liekom v EU každoročne spôsobia najmenej 25 000 úmrtí pacientov a vyžadujú si náklady vo výske 1,5 miliardy EUR v súvislosti so zdravotnou starostlivostou a znížením produktivity (\(^1\)).

OZNÁMENIE KOMISIE

Ustúpenia k ebozretnému používaniu antimikrobiálnych liečok vo veterínnej medicine

(2015/C 299/04)

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1 in 3 patients in hospitals in England are on an antibiotic at any one time.

1 in 3 individuals in England takes at least one course of antibiotics each year.
Deaths attributable to AMR every year compared to other major causes of death

AMR now 700,000 (low estimate)

Road traffic accidents 1.2 million
Cancer 8.2 million
Cholera 100,000–120,000
Diarrhoeal disease 1.4 million
Measles 130,000
Tetanus 60,000

AMR in 2050 10 million

1 in 3 patients in hospitals in England are on an antibiotic at any one time.
Consensus Statements of the American College of Veterinary Internal Medicine (ACVIM) and European College of Equine Internal Medicine (ECEIM) provide the veterinary community with up-to-date information on the pathophysiology, diagnosis, and treatment of clinically important animal diseases. The ACVIM Board of Regents oversees selection of relevant topics, identification of panel members with the expertise to draft the statements, and other aspects of assuring the integrity of the process. The statements are derived from evidence-based medicine whenever possible and the panel offers interpretive comments when such evidence is inadequate or contradictory. A draft is prepared by the panel, followed by solicitation of input by the ACVIM membership which may be incorporated into the statement. It is then submitted to the Journal of Veterinary Internal Medicine, where it is edited prior to publication. The authors are solely responsible for the content of the statements.

ACVIM Consensus Statement on Therapeutic Antimicrobial Use in Animals and Antimicrobial Resistance


The epidemic of antimicrobial resistant infections continues to challenge, compromising animal care, complicating food animal production and posing zoonotic disease risks. While the overall role of therapeutic antimicrobial use in animals in the development AMR in animal and human pathogens is poorly defined, veterinarians must consider the impacts of antimicrobial use in animal and take steps to optimize antimicrobial use, so as to maximize the health benefits to animals while minimizing the likelihood of antimicrobial resistance and other adverse effects. This consensus statement aims to provide guidance on the therapeutic use of antimicrobials in animals, balancing the need for effective therapy with minimizing development of antimicrobial resistance in bacteria from animals and humans.
adopted, ≥75% of members must have indicated that they strongly agreed (score = 1) or agreed (score = 2) with the statement.³

**Antimicrobial Use and Antimicrobial Resistance**

Any use of antimicrobials, whether considered therapeutic or not, and prudent or otherwise, exposes bacterial pathogens and the commensal microbiota to varying concentrations of antimicrobial drug for variable times. This creates a selection pressure that can result in emergence of resistance or, if a resistant sub-

![Image of bacterial structures]
Does Therapeutic Antimicrobial Use (Prudent or Otherwise) in Humans Contributes to Resistance Among Animal Pathogens?

While direct evidence is often lacking, there is circumstantial evidence indicating human origin, human-to-animal, or both modalities of transmission of some antimicrobial resistant pathogens, particularly in horses and household pets, but also in livestock. Yet, one
Does Therapeutic Antimicrobial Use (Prudent or Otherwise) in Animals Contribute to Resistance Among Animal Pathogens?

Some data indicate that therapeutic antimicrobial use in various animal species contributes to antimicrobial resistance among animal pathogens, but there is a relative paucity of information compared to that in the human literature and a profound lack of information on species
Are MDR Pathogens More Virulent than their Susceptible Counterparts?

It is commonly accepted that infections with antimicrobial-resistant organisms are generally associated with increased morbidity, increased case fatality risk, and increased treatment costs when compared to their antimicrobial-susceptible counterparts.
What Action should be Taken to Reduce the Risk and Occurrence of Antimicrobial Resistance Related to Therapeutic Use of Antimicrobials in Veterinary Medicine?

**General Methods to Reduce Antimicrobial Resistance**

There are 3 main general approaches that have been recommended for limiting AMR; preventing disease occurrence, reducing overall antimicrobial drug use and improved antimicrobial drug use. Preventing disease is a
as administration of tetracycline, because of colocation of zinc and methicillin-resistance genes.\textsuperscript{45,46} Further, if reduced prophylactic use of antimicrobials results in increased disease rates and the therapeutic use of newer antimicrobials with more profound impacts on the commensal microbiota, the net benefit of overall antimicrobial use may be less. The Committee emphasizes that we need to study the impacts and ensure that there are no unintended increases in resistance associated with interventions.

\textbf{Controlling Disease without Antimicrobials}

Not all animals that are ill have bacterial infections and not all bacterial infections require treatment with systemic, or indeed any, \textbf{antimicrobials}. Further, wors-ening disease states of critically ill animals is not neces-sarily a reason to
Duration of Therapy
Use of Periodic Antimicrobial Dosing

Some animals are periodically treated with antimicrobials to prevent disease, typically recurrent infections. Examples include single daily (usually night-time) dosing of amoxicillin for prevention of bacterial UTI, periodic short courses of cephalexin for prevention of superficial folliculitis in dogs and intermittent administration of azithromycin for prevention of Rhodococcus equi pneumonia. In the absence of strong evidence supporting these practices, the Committee discourages such approaches because these approaches fail to adhere to sound PK-PD concepts and the lack of evidence of efficacy or the impact on antimicrobial resistance. While clinical impression suggests that these approaches might...
Guidelines for the diagnosis and antimicrobial therapy of canine superficial bacterial folliculitis (Antimicrobial Guidelines Working Group of the International Society for Companion Animal Infectious Diseases)


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Recommendations for the diagnosis of canine superficial bacterial folliculitis

The predominant pathogen that causes SBF is *Staphylococcus pseudintermedius* (previously known and referred to as *Staphylococcus intermedius*). Although dogs may carry or be colonized and infected by *Staphylococcus aureus* and by the coagulase-variable species *Staphylococcus schleiferi*, these are far less frequent pathogens in SBF. Coagulase-negative staphylococci (CoNS; such as *Staphylococcus epidermidis* and *Staphylococcus xylosus*) may rarely be cultured from lesions of SBF, usually in association with *S. pseudintermedius*. The
clinical relevance of isolation of these species from SBF lesions is unclear. Other bacteria may, on rare occasions, cause lesions compatible with SBF. These include *Streptococcus canis, Pseudomonas aeruginosa* and other Gram-negative bacteria.¹¹,¹²

**Clinical signs**

In practice, the diagnosis of most cases of SBF is based upon clinical signs and the presence of characteristic lesions; there is no evidence that these differ amongst infections caused by the different staphylococci. Common
Recommendations for the treatment of canine superficial bacterial folliculitis

Veterinarians must consider the nature of the disease in each patient to determine the best mode of therapy. Traditional reliance on systemic AMDs and the expectation that empirical choices will always work are now challenged by the growing frequency of MRS that are resistant to these drugs. Microbiology reports should always be interpreted with care, bearing in mind meticillin resistance and other public health considerations, as well as the clinical disease status and therapeutic history of the patient (Table 2).
topical or systemic
Topical antimicrobial therapy

Topical therapy of SBF is probably underused because of the perception that clients will find it more difficult to apply and that compliance may be poor. However, there are significant potential advantages for early and frequent use of the topical approach in this disease. These advantages include more rapid lesion resolution and a decrease in the duration of antimicrobial administration when combined with systemic AMD therapy, removal of organisms and debris from the skin surface, minimal adverse effects and greatly reduced exposure to AMDs of bystander organisms in other organ systems (reducing risk of inadvertent emergence of resistant strains). In addition, resistance to the high concentrations of antimicrobials of AMDs can be