Clinical Communique on Topical Therapy for Skin Infections

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Recommendations for approaches to methicillin-resistant staphylococcal infections of small animals: diagnosis, therapeutic considerations and preventative measures.

Clinical Consensus Guidelines of the World Association for Veterinary Dermatology

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Proper diagnosis, treatment and prevention of skin infections have become a critical issue in veterinary health in recent years. Recent research has suggested that a majority of superficial skin infections have become multidrug resistant. The excerpts, taken from the journal article referenced above (reproduced with permission from *Veterinary Dermatology*) are intended to assist practitioners and staff in the diagnosis, treatment and prevention of skin infections in the clinical setting.

Journal Excerpts:

"Currently, some degree of antimicrobial resistance has been documented within all *Staphylococcus* species that infect humans and domestic animals.[1, 2] Even though methicillin is no longer used in clinical practice, the term "methicillin-resistant" has persisted and has been used since the discovery of cephalosporins in the 1970s to

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indicate strains that are resistant to all beta-lactams except the newest generation of cephalosporins which were specifically developed for treatment of MRSA infections (e.g. ceftaroline). When a MRS strain expresses co-resistance to at least two additional antimicrobial classes, it may be referred to as multidrug resistant (MDR) and the term extensively drug resistant (XDR) may be used if the strain is non-susceptible to all but two or fewer antimicrobial classes.[21]

Consensus statement 5: Topical therapy, using antibacterial agents with proven anti-staphylococcal efficacy, is the recommended treatment modality for any surface and superficial pyoderma involving MRS, particularly those with localized lesions, and for otitis and superficial wound infection.

The skin is easily accessible by topical treatment and antimicrobial formulations for use in small animals are available in most countries. A systematic review of topical therapy for canine skin infections concluded that evidence from randomized controlled trials was sparse on topical treatments, but that good evidence supported the use of shampoos containing 2–3% chlorhexidine and to a lesser extent of benzoyl peroxide in bacterial skin infections.[94]

Consensus statement 6: Topical therapy should be used as the sole on-animal antibacterial treatment for surface and superficial infections whenever a pet and owner can be expected to be compliant.

Although dermatology texts still recommend systemic antimicrobial therapy for superficial pyoderma with or without added topical medication, this recommendation can be challenged during times of increasing antimicrobial resistance. Newer studies have provided evidence that topical therapy as the sole antibacterial treatment can be effective in superficial pyoderma, providing opportunity to reduce the need for systemic therapy in some cases.

Consensus statement 8: Empirical drug selection for systemic therapy is always contraindicated when a MRS infection is suspected based on historical factors, due to the high prevalence of multidrug resistance within these strains.

Susceptibility test results should always be available to make treatment decisions once MRS have been identified. However, if MRS is only suspected, for example following previous infections or based on cytological evidence of infection after antimicrobial therapy, a careful, susceptibility test-based approach is indicated to ensure best use of the remaining effective agents."

Further guidelines including proper hospital infection control, hygiene personal protective equipment and disinfection protocols can be found in the full report available at www.WAVD.org or https://onlinelibrary.wiley.com/doi/epdf/10.1111/vde.1244 including the complete list of references cited in the article.

References Cited in the Excerpts:

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