

METHICILLIN-RESISTANT *Staphylococcus aureus* AND COAGULASE-NEGATIVE STAPHYLOCOCCI ISOLATED FROM EXTERNAL NOSTRILS OF DOGS' OWNERS: A WARNING FOR HUMAN HEALTH

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Staphylococcus spp. colonizes the skin and mucous membranes of humans. However, *Staphylococcus aureus* is the etiologic agent of multiple community and nosocomial infections. Coagulase-negative staphylococci now represent one of the major nosocomial pathogens, with *S. epidermidis* and *S. haemolyticus* being the most significant species. Dogs can be colonized with different multi-resistant *Staphylococcus* species that can be transmitted to man. This study aimed to investigate the colonization by methicillin-resistant *S. aureus* (MRSA) and coagulase negative staphylococci in the external nostrils from dogs with owners. Search of MRSA and coagulase negative staphylococci in nostril swab samples from dogs with owners (n : 89), for the assessment of antimicrobial resistance was carried out. Swab samples were inoculated into nutrient broth with 6.5% NaCl. Then, cultures were performed in Mannitol salt agar (MSA) and MSA added with cefoxitin (4 mg/L). For the phenotypic characterization at species level, Gram staining, catalase and coagulase production assays were performed. Assessment of *in vitro* antimicrobial resistance was carried out with VITEK 2 Compact™ automated microbial identification system. Minimum Inhibitory Concentration (MIC) for oxacillin, cefoxitin, clindamycin, erythromycin and gentamicin was determined, according to the Clinical and Laboratory Standards Institute's recommendations. MRSA with associated resistance to gentamicin (2/89), clindamycin (1/89) and erythromycin (1/89) were recovered from dogs. Coagulase negative staphylococci (11/89) were also recovered from dogs' nostrils: *S. epidermidis* (6/89), *S. haemolyticus* (3/89), *S. warneri* (1/89), *S. hominis* (1/89) and *S. lugdunensis* (1/89). From one dog, two species were isolated, *S. epidermidis* and *S. hominis*. Oxacillin-resistant (MIC > 4 mg/L) *S. epidermidis* (2/6) showed resistance to erythromycin (MIC > 8 mg/L). The find of staphylococcal isolates from dogs nostrils expressing resistance to antimicrobials employed in human therapy, together with the close coexistence with their owners, constitute a significant risk for Human health.

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