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[P269] EMERGENCE OF NON-WILD-TYPE POPULATIONS TOWARDS BIOCIDES IN STAPHYLOCOCCUS EPIDERMIDIS COLONIZING VETERINARY STAFF

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Aims: To characterize biocide susceptibility of *Staphylococcus epidermidis* colonizing veterinary staff; propose epidemiological cut-off (ECOFF) values; assess relationships between biocide and antibiotic resistance phenotypes.

Methods: The susceptibility profiles of 112 *S. epidermidis* isolates from nasal colonization of veterinary staff towards six biocides (including benzalkonium chloride, chlorhexidine and triclosan) and ethidium bromide (EtBr), was determined by microdilution MIC determination. The MIC distributions were analyzed by the normalized resistance interpretation method and the iterative statistical method to determine ECOFF values. Antibiotic susceptibility was determined by disc diffusion and antimicrobial resistance determinants screened by PCR.

Results: Analysis of MIC distributions enabled the detection of non-wild-type (NWT) populations towards most biocides and to the efflux marker EtBr and the proposal of tentative ECOFF values for the compounds tested. The NWT populations were correlated with carriage of the plasmid-encoded efflux pump genes *qacA/B* and/or *smr*. NWT populations to triclosan were correlated with *sh-fabI* gene. We observed high frequencies of methicillin resistance (*mecA*⁺, 61 %) as well as of multidrug resistance phenotypes (50 %). Several determinants were associated with resistance phenotypes, including *blaZ*, *erm*, *vga* and *fus* genes. Carriage of *qacA/B* and/or *smr* was statistically associated with MDR phenotypes.

Conclusions: This study discloses the first tentative ECOFF values of several biocides for *S. epidermidis*. It also reveals a high prevalence of biocide and antibiotic resistant *S. epidermidis* colonizing humans in close contact with animals, suggesting that these bacteria can be reservoirs for antimicrobial resistance.

These results were partially presented at ECCMID2018 (Madrid, Spain, April 21-24 2018).