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Clinical prevalence, histopathological evaluation, antimicrobial susceptibility and molecular genotyping of staphylococci from canine pyoderma: The first prospective study of first-time cases in Iran

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The purpose of the present study was to investigate the prevalence of staphylococci isolation from dogs with first time pyoderma and to describe antimicrobial susceptibility and enterobacterial repetitive intergenic consensus-based PCR typing of clinical staphylococci species from dogs presenting at a university teaching hospital. The study animals were 61 clinical cases of dogs with first-time pyoderma. Swabs for bacterial culture were taken from pustule or papule without prior disinfection. Isolates were identified on the basis of colony morphology, Gram-staining, pigment production and hemolysis. For all Gram-positive, catalase-positive, oxidase-negative cocci with colony morphology compatible with that of *Staphylococcus* species, coagulase activity was determined via the tube coagulase test using rabbit plasma. The susceptibility of staphylococci to various antimicrobial drugs was assessed by the disk diffusion method. To define genetic relativity of staphylococci species, enterobacterial repetitive intergenic consensus test was done. Finally, biopsy samples of affected skin were obtained from 42 of the 61 studied dogs. The most frequently recovered bacterial genus was *Staphylococcus* (32/43 isolates, 74.41%) including: *S. epidermidis* (22/43 isolates, 51.16%), *S. aureus* (7/43 isolates, 16.27%) and *S. pseudintermedius* (3/43 isolates, 6.97%). Staphylococci species resistance was most commonly seen against amoxicillin (94.11%), penicillin (83.35%) and ampicillin (76.47%). Resistant to cephalexin and cefoxitin was 5.88% and 2.94%, respectively. A total of 27 of the staphylococci isolated (84.37%) were resistant to at least one antimicrobial agent. 16 different patterns were recognized among 22 isolates of *S. epidermidis* (one strain was not typed). Among 7 isolates of *S. aureus*, 3 different patterns were observed.

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