

SUMMARY

Determination of *Staphylococcus intermedius*'s exfoliative toxin isolated from healthy dogs and dogs with otitis externa

S. intermedius causing otitis externa include species which are known and frequently isolated. In addition *S. intermedius* can be found commensals as in mucous membrane of mouth, ear, nose, pharynx and anus of healthy dogs and can be isolated from there. Because of producing toxin and being superantigen, *S. intermedius* is an important zoonotic feature bacteria. The most important producing toxin which by *S. intermedius* is exfoliative toxin (*siet*).

Aim of this study was to develop a Polymerase Chain Reaction (PCR) technique for determinate of *siet* gene encoding exfoliative toxin in *S. intermedius* and to compare its presence ratio between *S. intermedius* isolates from healthy and dogs with otitis externa. We used 100 isolates (52 isolates from dogs with otitis externa, 48 isolates from healthy dogs) in this study. This isolates collected from ears of dogs which different breed, age and sex. Although 22 isolates (16 isolates dogs with otitis externa, six isolates healthy dogs) were coagulase positive staphylococci result from phenotypic and biochemical tests, bacterial growth was observed in 46 isolates of isolated from dogs with otitis externa. *nuc* genes of this 22 isolates were determined with PCR technique and five isolates (four isolates from dogs with otitis externa, one isolates from healthy dogs) of this 22 isolates were genotypically verified which they are *S. intermedius*. After that *siet* gene encoding exfoliative toxin was determined with PCR technique in this five isolates.

Consequently, exfoliative toxin of *S. intermedius* causes otitis externa in dogs has proven based from determining *siet* gene encoding exfoliative toxin in collected isolates from dogs. The reason for determining *siet* gene from one healthy dog isolates believed to be caused by the course of the disease asymptomatic. Rapid and secure detection of staphylococci causing otitis externa in dogs and their virulence markers like *siet* gene will provide important data for clinical practice to manage the disease more effectively by means of treatment and prevention.

Key Words: Dog, *Staphylococcus intermedius*, exfoliative toxin, otitis externa