

Identification of *Malassezia* species in domestic animals with dermatitis or otitis by PCR-RFLP

Jae-Ik Han, Ki-Jeong Na*

Department of Veterinary Laboratory Medicine, College of Veterinary Medicine, Chungbuk National University, Cheongju 361-763, South Korea.

Introduction: *Malassezia* species are part of the resident skin flora of humans and other warm-blooded vertebrates and these yeasts are associated with various superficial diseases, including seborrheic dermatitis and folliculitis. According to the previous reports, *Malassezia* species were re-distributed in dogs with dermatitis or otitis. In generally, *Malassezia pachydermatis*, non-lipid dependent organism, is a main pathogen in dogs and cats, but the infections of *Malassezia furfur* and *Malassezia obtusa* were frequently reported. In ruminants and horses, the infections of the lipid-dependent species were reported. Although *Malassezia* species were not primary cause in dermatologic disease, it sometimes changed to main cause. The object of this study was to quantify of the dermatologic/otic patients on Veterinary Medical Center in Chungbuk National University from July, 2004 to September, 2006 and to identify a subtype of *Malassezia* infection from June, 2006 to September, 2006.

Materials and methods: From July, 2004 to September, 2006, we investigated the 224 dermatologic /otic outpatients. If infections due to *Malassezia* were identified by cytologic examination, PCR-RFLP performed for identification of *Malassezia* subtype from June, 2006 to September, 2006. The primer selection was based on alignment of published 26S rDNA sequences of known *Malassezia* species and the restriction enzyme *CfoI* and *BtsCI* were selected to achieve the species-specific pattern. The standard strain of *Malassezia furfur*, *pachydermatis* and *obtusa* were selected to control group.

Results: Bacteria was most common infectious agents regardless of primary causes. Yeast was identified as a second pathogen in dermatitis or otitis and frequent occurrence from June to September. *Malassezia furfur* was confirmed as a main pathogen in domestic animals with dermatitis or otitis.

Clinical relevance: In this study, lipid dependent organisms were main pathogens in domestic animals with dermatitis or otitis from June to September. These results suggest that degreasing agents such as benzoyl peroxide, selenium disulfide and sulfur are necessary for treatment and prevention of *Malassezia* infection of domestic animals in this period.

* E-mail : sigol@cbnu.ac.kr