Abstract

Dermatophytes are amongst the most common causative agents of fungal infections worldwide and widespread in the developing countries. Traditional methods of dermatophytes identification are based on detection of fungal elements by direct microscopy of clinical specimens, combined with culture-based identification. Recent molecular methods may be an attractive alternative for rapid and accurate identification of dermatophytes.

The aim of this study was to determine dermatophyte infection, identify different dermatophyte species among the studied patients, and to compare PCR-RFLP and culture-based species identification.

Hair, skin and nail specimens were collected from 135 patients complaining of lesions suspected of dermatophytic infection. All specimens were subjected to microscopic examination using KOH and culture on SDA and dermasel agar. Phenotypic species identification was done by colony morphology, microscopic examination, subculture on malt, PDA, lactrimel and urea agar. Molecular identification was done by PCR-RFLP.

Out of 135 patients that were included in the study, 78 (57.8%) were positive by culture for dermatophytes. In the 78 dermatophyte isolates, five different species were identified, the most common isolated species was *M. canis* (51.3%) followed by *T. violaceum* (42.3%). PCR-RFLP correctly identified the isolated dermatophyte species, producing unique restriction patterns.

Key words: dermatophytes, dermatophytosis, Conventional Methods, PCR-RFLP