Diagnostic Trial for Cutaneous Mycobacterial Diseases by Using PCR Techniques

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For the diagnosis of mycobacterium tuberculosis (TB) infection, identification of bacteria by Ziel-Neelsen stain and culture methods are very useful. Eventually, sometimes it is very difficult to detect bacteria especially in skin samples. Recently, DNA-DNA hybridization and amplification of Mycobacterium Tuberculosis DNA have been considered as a new method for the diagnosis. This new method requires cultured samples. When culture of bacteria fails, then PCR analysis become the more important useful method, which requires a small quantity of DNA of tissue samples. In this study, we reported a total of five cutaneous mycobacterial infected patients, in which four cases were scrofuloderma and another was warty type. All cases were confirmed by positive results to Ziel-Neelsen stain and culture. The confirmation can be made on positive culture only in our cases, but we performed PCR analysis and direct-sequence analysis, by using DNA product of the skin tissues instead of cultured sample for species identification. PCR analysis is easy and simple as compared to other diagnostic tests. We confirmed the all fives cases were infected with mycobacterium tuberculosis. From these observations, we considered that PCR analysis might be useful for the diagnosis for cutaneous tuberculosis.

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