EVALUATION OF DERMATOPHYTE TEST STRIP AS DIAGNOSTIC METHOD FOR DERMATOPHYTES DETECTION IN TINEA UNGUIUM

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Introduction: The direct microscopy and fungal culture are the gold standard to diagnose tinea unguium, however, the results tend to be dependent on skill of performer. The Dermatophyte Test Strip, a novel diagnostic method to detect dermatophytes, facilitates the diagnosis of tinea unguium.

Objective: We sought to evaluate the diagnostic capacity of the Dermatophyte Test Strip to dermatophytes detection in tinea unguium specimens.

Materials and Methods: We used the direct microscopy and the Dermatophyte Test Strip on the specimens to dermatophytes dection. If the results of the two tests were different, we used polymerase chain reaction (PCR) to confirm the presence of dermatophytes.

Results: We analyzed 120 specimens clinically suspected tinea unguium. On the direct microscopy, the 77 (64.2%) specimens showed positive results. In comparison, on the Dermatophyte Test Strip, the 66 (55%) specimens showed positive results. In all of the 27 specimens on PCR, the dermatophytes were detected. When comparing the results of the direct microscopy combined with PCR and the those of Dermatophyte Test Strip, the positive/negative/overall concordance rate were 100%, 81.4%, 93.3% respectively and κ-coefficient was 0.85 (95% confidence interval, 0.75–0.95).

Conclusions: This study suggests that the Dermatophyte Test Strip may be a useful diagnostic tool to detect dermatophytes in clinically suspected tinea unguium specimens.