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Title

The accuracy of clinical diagnosis of onychomycosis in Dutch general practice

Priority 1 (Research Category)

Infectious Diseases (not respiratory tract)

Presenters

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Abstract

Context: Onychomycosis, the most common cause of abnormal nails, is generally considered a clinical diagnosis. Accordingly, the current Dutch guideline for GPs advises only to perform confirmatory testing in case of doubt or insufficient effect from already initiated therapy. To know to what extent GPs correctly diagnose onychomycosis based on clinical evaluation alone is important to establish, especially when considering treatment.

Objective: To establish the accuracy of clinical diagnosis of onychomycosis by GPs in primary care.

Design and Analysis: Using data from the ongoing Onycho Trial, a RCT to study the effectiveness of local therapy (miconazole or amorolfine vs placebo) for mild to moderately severe onychomycosis, diagnostic properties of the clinical diagnosis by GPs were calculated for 137 cases from the trial, comparing clinical diagnosis by the GPs as the index test, to the overall result of confirmatory testing (KOH, PCR and culture) as reference standard. The influence of the different clinical characteristics recorded through the Onycho Trial on the clinical accuracy was evaluated using logistic regression analysis.

Setting/Dataset: primary care patients and patients from the general population; data from the Onycho Trial.

Population Studied: participants were recruited through local general practices and from the general Dutch public via (social) media.

Intervention/Instrument: clinical diagnosis of onychomycosis by the GP

Outcome Measures: accuracy of clinical diagnosis, represented by the positive predictive value (PPV).

Results: The PPV of clinical diagnosis by the GP was 74.5%. Multivariate logistic regression analysis showed a significant effect of male gender and any previous treatment with an OR of 3.873 (95% CI 1.230 - 12.195, p-value 0.021) and 4.02 (95% CI 1.08-15.04, p-value 0.039), respectively.

Conclusions: This study shows a modest accuracy of clinical diagnosis and thus a significant chance of a false positive diagnosis. Making a correct diagnosis is more likely in men and those who have tried any form of treatment previously. Because data was collected from a randomized intervention study for mild to moderately severe onychomycosis, this study is subject to selection and possible observer bias, probably resulting in an underestimation of the accuracy of clinical diagnosis. Nevertheless, it might still be sensible to keep the false positives in mind, especially when considering oral or other extensive treatments.