INPLASY PROTOCOL

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Conflicts of interest:
None declared.

The relative efficacy of monotherapies for dermatophyte toenail onychomycosis: a systematic review with quantitative syntheses of the evidence base

Gupta, AK[1]; Venkataraman, M[2]; Bamimore, MA[3].

Review question / Objective: **The objective of the proposed study is to examine the relative efficacy of monotherapies for dermatophyte toenail onychomycosis, as per mycological, clinical and/or complete cure rates.**
Condition being studied: **Dermatophyte toenail onychomycosis.**
Eligibility criteria: **A randomized or observational study with at least one arm investigating the efficacy of antifungal monotherapy for dermatophyte toenail onychomycosis in terms of mycological cure, complete cure and/or clinical cure.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 April 2022 and was last updated on 27 April 2022 (registration number INPLASY202240157).

INTRODUCTION

Review question / Objective: **The objective of the proposed study is to examine the relative efficacy of monotherapies for dermatophyte toenail onychomycosis, as per mycological, clinical and/or complete cure rates.**

Rationale: **Many individuals are affected by onychomycosis, a term that corresponds to fungal infection of the nails; furthermore, the infections occur more often in the nails of the toes than in those of the fingers. Having onychomycosis is correlated with a decreased quality of life. Numerous therapeutic agents exist for the management of toenail onychomycosis,**

and investigating the relative efficacy thereof would have great clinical and research implications.

Condition being studied: Dermatophyte toenail onychomycosis.

METHODS

Search strategy: The literature was systematically searched through the PubMed database.

Participant or population: Our population of interest is healthy immunocompetent adults (i.e., aged 18 years or above) with dermatophyte toenail onychomycosis. Participants can be of any sex/gender and race/ethnicity.

Intervention: Our intervention of interest is any monotherapy used for treating dermatophyte toenail onychomycosis.

Comparator: Comparators can be any of the following:(1) vehicle/placebo & (2) other monotherapies for treating dermatophyte toenail onychomycosis.

Study designs to be included: Evidence will be gathered from randomized and observational studies.

Eligibility criteria: A randomized or observational study with at least one arm investigating the efficacy of antifungal monotherapy for dermatophyte toenail onychomycosis in terms of mycological cure, complete cure and/or clinical cure.

Information sources: Searches were conducted in PubMed.

Main outcome(s): Mycological, clinical and/or complete cure.

Data management: Data will be organized into spreadsheets.

Quality assessment / Risk of bias analysis: Quality of evidence within studies will be assessed using Cochrane Collaboration's risk of bias (RoB) tool; evidence quality across studies will be evaluated using the Grading of Recommendations, Assessment, Development and Evaluations (GRADE) framework.

Strategy of data synthesis: The evidence we gather after the data extraction stage will guide the logistics of all quantitative analyses.

Subgroup analysis: If there is sufficient data, clinically meaningful subgroup analyses will be done.

Sensitivity analysis: None.

Language: Only evidence in English language will be included.

Country(ies) involved: Canada.

Keywords: dermatophytosis; antifungal therapy; network meta-analysis; mycological cure.

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