

INPLASY PROTOCOL

The recurrence rate of Herpes Zoster: systematic review and a meta-analysis

To cite: Zhang et al. The recurrence rate of Herpes Zoster: systematic review and a meta-analysis. Inplasy protocol 202290090. doi: 10.37766/inplasy2022.9.0090

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Received: 19 September 2022

Published: 19 September 2022

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Review Stage at time of this

submission: Data analysis.

Conflicts of interest:

None declared.

Review question / Objective: The study aimed to assess the recurrence rate of HZ and evaluate risk factors for HZ recurrence.

Condition being studied: The current knowledge on the incidence of recurrent HZ and the relationship between initial and the recurrent is limited. There have been several studies on HZ recurrence and reported rates varying from 1.1% to 14.9%, These usually depended on hospital-based data with a small number of cases or a short follow-up period. More general population data on the recurrence of HZ is necessary for treating and preventing recurrent cases. Through the meta-analysis of the current literature was set to analyze the HZ recurrence rates and identify the HZ recurrence risk factors.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 September 2022 and was last updated on 19 September 2022 (registration number INPLASY202290090).

INTRODUCTION

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the recurrent is limited. There have been several studies on HZ recurrence and reported rates varying from 1.1% to 14.9%, These usually depended on hospital-based data with a small number of cases or a short follow-up period. More general population data on the recurrence of HZ is necessary for treating and preventing recurrent cases. Through the meta-analysis

of the current literature was set to analyze the HZ recurrence rates and identify the HZ recurrence risk factors.

METHODS

Search strategy: The search formula was (Zona) OR (Herpes Zoster) OR (Zoster) OR (Shingles) AND (recurrence*) OR (recrudescence*) OR (relapse*) OR (reinfect*) OR (recurrent) OR (recurred).

Participant or population: Patients with herpes zoster.

Intervention: Recurrence of herpes zoster.

Comparator: The initial episode of herpes zoster.

Study designs to be included: Both cross-sectional and longitudinal studies were included.

Eligibility criteria: Data were analyzed according to European consensus-based (S2k) Guideline and based on the definitions of HZ as outlined in the original articles. Our definition of HZ recurrence was all patients had suffered from the previous HZ, and more than 90 days after the last standard diagnostic evaluation was taken as the date of outcome.

Information sources: PubMed, Embase, and Cochrane Library.

Main outcome(s): The recurrence rate of herpes zoster.

Additional outcome(s): The risk factors of recurrence with herpes zoster.

Quality assessment / Risk of bias analysis: Quality assessment of the studies was conducted by two authors independently using the Newcastle-Ottawa quality assessment scale. To assess publication bias, we plotted funnel plots and Egger test. All analyses were two sided with $P < 0.05$ defining statistical significance.

Strategy of data synthesis: This meta-analysis was conducted using R software version 3.5.2 (R Development Core Team) to analyze all studies (using the meta package). The available data were converted using a Freeman-Tukey Double arcsine transformation. Heterogeneity between studies was calculated by Cochran-Q, I² statistics, and χ^2 test, with a P-value of < 0.05 and an I² statistic with a cut-off of 50%, which were used to define a statistically significant degree of heterogeneity.

Subgroup analysis: Subgroup analysis included age, sex, recurrence time, immune status.

Sensitivity analysis: Sensitivity analyses, which compare pooled risk estimates after eliminating each study in turn, were performed to assess whether one study had unduly influenced the pooled estimates.

Country(ies) involved: China.

Keywords: Herpes Zoster, Recurrence, Meta-analysis, Epidemiology.

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