INPLASY PROTOCOL

To cite: Liang et al. Potential correlation between eczema and hematological malignancies risk: a systematic review and meta-analysis. Inplasy protocol 202260097. doi: 10.37766/inplasy2022.6.0097

Received: 24 June 2022

Published: 24 June 2022

Corresponding author:
Yun Zhu

zhuyun8377@163.com

Author Affiliation:
Department of Dermatology and Venereology, The Sixth Affiliated Hospital of Kunming Medical University, Yuxi, Yunnan, China.

Support: **None.**

Review Stage at time of this submission: **Completed but not published.**

Conflicts of interest:
None declared.

Potential correlation between eczema and hematological malignancies risk: a systematic review and meta-analysis

Liang, ZH[1]; Liu, J[2]; Jin, HX[3]; Teng, YR[4]; Xu, SY[5]; Yan, WM[6]; Zhu, Y[7].

Review question / Objective: **This study was designed to explore the relationship between eczema and the risk of hematological cancers.**
Condition being studied: **Hematological malignancies, mainly including lymphoma, leukemia, myeloma, are a common group of highly heterogeneous disorders characterized by uncontrolled proliferation and differentiation of hematopoietic cells. In accordance with American Cancer Society, approximately 184130 new cases and 57810 deaths of hematological malignancies were estimated in the United States in 2022. Although many researchers have focused on the pathogenesis of hematologic malignancies in recent years and new treatments are available, the long-term survival rate is still unsatisfactory. Therefore, there is an urgent need to find new specific and non-invasive indicators to evaluate the prognosis of the disease so as to carry out early intervention.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 June 2022 and was last updated on 24 June 2022 (registration number INPLASY202260097).

INTRODUCTION

Review question / Objective: **This study was designed to explore the relationship between eczema and the risk of hematological cancers.**

Condition being studied: **Hematological malignancies, mainly including lymphoma, leukemia, myeloma, are a common group of highly heterogeneous disorders characterized by uncontrolled proliferation and differentiation of hematopoietic cells. In accordance with American Cancer**

Society, approximately 184130 new cases and 57810 deaths of hematological malignancies were estimated in the United States in 2022. Although many researchers have focused on the pathogenesis of hematologic malignancies in recent years and new treatments are available, the long-term survival rate is still unsatisfactory. Therefore, there is an urgent need to find new specific and non-invasive indicators to evaluate the prognosis of the disease so as to carry out early intervention.

METHODS

Participant or population: The inclusion criteria were as follows: all cohort and case-control studies focusing on the relationship between eczema and hematological malignancy; odds ratios (ORs) and 95% confidence intervals (CIs) were provided or calculated.

Intervention: Eczema.

Comparator: Developing eczema.

Study designs to be included: Cohort and case-control studies.

Eligibility criteria: Animal studies, reports with no indication of the association between eczema and cancers, and reviews were excluded.

Information sources: We performed this study. PubMed and Embase databases were systematically searched till February 17, 2022 to find studies performed on the relationship between eczema and hematological cancers.

Main outcome(s): Patients developing hematological cancers.

Quality assessment / Risk of bias analysis: Begg's test and Egger's test were used to assess the potential publication bias.

Strategy of data synthesis: The ORs and 95% CIs reported in the studies were pooled by meta-analysis. The Cochrane Q and I2 statistics were used to evaluate heterogeneity. When P value was 50%, the data were considered heterogeneous, and a random-effects model was applied. Otherwise, a fixed-effects model was used.

Subgroup analysis: To further explore the origin of heterogeneity, we performed subgroup analyses by region, study design, and cancer type.

Sensitivity analysis: To assess the credibility of our results, sensitivity analyses were conducted by excluding each study in turn to estimate the influence of each individual study on the pooled results.

Country(ies) involved: China.

Keywords: eczema, hematological malignancies, Hodgkin's lymphoma, lymphocytic leukemia, myelocytic leukemia, risk.

Contributions of each author:
Author 1 - Zuohui Liang.
Author 2 - Jie Liu.
Author 3 - Hongxia Jin.
Author 4 - Yirong Teng.
Author 5 - Shuangyan Xu.
Author 6 - Weimin Yan.
Author 7 - Yun Zhu.