INPLASY PROTOCOL

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Review Stage at time of this submission: **Preliminary searches.**

Conflicts of interest:
None declared.

The prevalence and outcomes of anemia among patients with systemic lupus erythematosus: A systematic review and meta-analysis

Pan, SY[1]; Zhu, Y[2].

Review question / Objective: **The progression of systemic lupus erythematosus (SLE) leads to anemia in patients, adversely affecting prognosis. While there are still lacking systematic review evaluating the prevalence and outcomes of anemia among patients with systemic lupus erythematosus. Therefore, this study aims to explore the prevalence and outcomes of anemia among patients with systemic lupus erythematosus.**
Information sources: **Pubmed, Embase, Medline(Ovid), Web of science, Cochrane, or grey literature.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 May 2023 and was last updated on 10 May 2023 (registration number INPLASY202350036).

INTRODUCTION

Review question / Objective: **The progression of systemic lupus erythematosus (SLE) leads to anemia in patients, adversely affecting prognosis. While there are still lacking systematic review evaluating the prevalence and outcomes of anemia among patients with systemic lupus erythematosus. Therefore, this study aims to explore the prevalence and outcomes of anemia among patients with systemic lupus erythematosus.**

Condition being studied: **Systemic lupus erythematosus.**

METHODS

Search strategy: **Anemia[Mesh]**
Anemia*
Lupus Erythematosus, Systemic[mesh]

Systemic Lupus Erythematosus
Lupus Erythematosus Disseminatus
Libman-Sacks Disease
Disease, Libman-Sacks
Libman Sacks Disease.

Participant or population: Systemic Lupus Erythematosus.

Intervention: Anemia.

Comparator: Non-anemia.

Study designs to be included: Observational studies.

Eligibility criteria: Observational studies investigate the role of anemia among SLE patients.

Information sources: Pubmed, Embase, Medline(Ovid), Web of science, Cochrane, or grey literature.

Main outcome(s): 1. the pooled prevalence of anemia among SLE patients; 2.the incident risk of composite adverse clinical outcomes.

Quality assessment / Risk of bias analysis: AHRQ for the cross-sectional studies and NOS for the cohort studies.

Strategy of data synthesis: This meta analysis was performed using Stata software. Cochran's Q test and I2 statistics were used to test the heterogeneity of the study. If heterogeneity was found to be significant (P <0.05, I2≥50%), the random-effects model was used. Otherwise, the fixed-effects model was used. At this time, random effect model is used when combining effects; otherwise, fixed effect model is used for analysis.

Subgroup analysis: We conducted subgroup analysis and meta-regression according to study design, sample size, study region.

Sensitivity analysis: sensitivity analysis was conducted by removing each study one by one.

Country(ies) involved: China.

Keywords: Systemic Lupus Erythematosus, Anemia, Meta-analysis.

Contributions of each author:
Author 1 - Shu-Yue Pan.
Author 2 - Yong Zhu.