INPLASY

Serum ferritin as a significant biomarker for patients with idiopathic inflammatory myopathy-associated interstitial lung disease: A systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION

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

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 November 2023 and was last updated on 02 November 2023.

INTRODUCTION

Review question / Objective To explore the clinical significance of serum ferritin levels in the occurrence, progression, and death in IIM-ILD patients, aim to reveal the clinical significance of SF in IIM-ILD.

Condition being studied PubMed, Embase, Web of science and Scopus database、researcher、PRISMA guideline、STATA software(package meta, version 16.0).

METHODS

Participant or population idiopathic inflammatory myopathy(IIM) patients and idiopathic inflammatory myopathy-associated interstitial lung disease(IIM-ILD) patients.

Intervention Serum ferritin levels in idiopathic inflammatory myopathy-associated interstitial lung disease(IIM-ILD) group.

Comparator Serum ferritin levels in idiopathic inflammatory myopathy(IIM) group.

Study designs to be included Retrospective study.

Eligibility criteria The inclusion criteria were as follows: (1) case-control studies, cohort studies, and cross-sectional studies; (2) IIM-ILD was diagnosed by clinical features and high-resolution computed tomography (HRCT). Rapidly progressive interstitial lung disease (RP-ILD) was defined as an acute worsening of dyspnea secondary to ILD, requiring hospitalization, supplemental oxygen, or intubation for respiratory failure within 3 months of ILD diagnosis[8]. Chronic ILD (C-ILD) was defined as asymptomatic or

gradually progressive ILD with a duration exceeding 3 months; (3) availability of quantitative data; (4) English literature.The exclusion criteria were as follows: (1) Review, case report, letter/ comment and conference abstract; (2) other connective tissue disease-associated ILD (CTD-ILD); (3) studies that SF was not a study index; (4) inability to obtain quantitative data on SF or to be converted by algorithms.

Information sources PubMed, Embase, Web of science and Scopus.

Main outcome(s) 1、IIM patients had or did not have ILD; 2、Rapidly progressive interstitial lung disease (RP-ILD) or chronic interstitial lung disease(C-ILD) in IIM-ILD patients; 3、Survival or Death in IIM-ILD patients.

Quality assessment / Risk of bias analysis Newcastle-Ottawa Quality Assessment Scale.

Strategy of data synthesis Stata software(package meta, version 16.0) heterogeneity is assessed by Cochran's Q statistic and inconsistency value (I2). If $p< 0.05$ or $I2\geq 50\%$, it was considered significant heterogeneity, and the Dersimonian-Laird method should be used to pool the results; otherwise, inverse-variance method would be used.

Subgroup analysis Subgroup analysis was performed according to IIM subtypes(including DM、PM、DM/PM).

Sensitivity analysis The sensitivity analysis was carried out by excluding one category of literature at a time using Stata software(package meta, version 16.0).

Country(ies) involved China.

Keywords idiopathic inflammatory myopathy; interstitial lung disease; Serum ferritin.

Contributions of each author

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Author 2 - Jiaqi Ji - contributed equally as the first authors to this work.
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