INPLASY PROTOCOL

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None declared.

The prognosis and its clinical predictors of combined pulmonary fibrosis and emphysema comparison with idiopathic pulmonary fibrosis: a systematic review and meta-analysis

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Review question / Objective: **The aims of this systematic review are to 1) synthesize the latest evidence of prognosis and compare it with CPFE and IPF; 2) analyze the predictive value of clinical factors for the prognosis of CPFE by meta-analysis.**
Condition being studied: **Patients with combined pulmonary fibrosis and emphysema (CPFE) exhibit clinical characteristics different from those of chronic obstructive pulmonary disease (COPD) and idiopathic pulmonary fibrosis (IPF). Several studies have investigated the prognosis of CPFE versus IPF, but with contradictory results. The aims of this systematic review are to 1) synthesize the latest evidence of prognosis and compare it with CPFE and IPF; 2) analyze the predictive value of clinical factors for the prognosis of CPFE by meta-analysis.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 October 2022 and was last updated on 20 October 2022 (registration number INPLASY2022100081).

INTRODUCTION

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chronic obstructive pulmonary disease (COPD) and idiopathic pulmonary fibrosis (IPF). Several studies have investigated the prognosis of CPFE versus IPF, but with contradictory results. The aims of this systematic review are to 1) synthesize the latest evidence of prognosis and compare it with CPFE and IPF; 2) analyze the predictive value of clinical factors for the prognosis of CPFE by meta-analysis.

METHODS

Search strategy: The initial search items included "emphysema" and "idiopathic pulmonary fibrosis" and related words.

Participant or population: Patients with CPFE and IPF fulfill the diagnostic criteria that IPF was diagnosed according to the latest ATS/ERS/JRS/ALAT diagnostic guidelines, and CPFE was defined as IPF coexisting with pulmonary emphysema based on HRCT findings

Intervention: N/A.

Comparator: CPFE and IPF.

Study designs to be included: prospective or retrospective cohort studies and case-control studies.

Eligibility criteria: (1) study population: patients with CPFE and IPF fulfill the diagnostic criteria that IPF was diagnosed according to the latest ATS/ERS/JRS/ALAT diagnostic guidelines, and CPFE was defined as IPF coexisting with pulmonary emphysema based on HRCT findings; (2) comparison: CPFE and IPF; (3) study outcomes: survival rate and prognostic factors; and (4) study type: prospective or retrospective cohort studies and case-control studies.

Information sources: PubMed, Embase, and Cochrane Central Register of Controlled Trials (CENTRAL) databases.

Main outcome(s): survival rate and prognostic factors.

Quality assessment / Risk of bias analysis: The Newcastle Ottawa scale (NOS) was used to assess the risk of bias in the included studies. A funnel plot was used to measure the risk of publication bias.

Strategy of data synthesis: If severe heterogeneity was present at I2 >50%, the random effect models were chosen, otherwise, the fixed effect models were used.

Subgroup analysis: We divided the included studies into two groups according to nationality.

Sensitivity analysis: The analysis of sensitivity and the source of the heterogeneity was evaluated by (1) changing the analysis model and (2) screening the included studies to assess the impact of each study on the outcomes.

Language restriction: The language was restricted to English and Chinese.

Country(ies) involved: China.

Keywords: Combined pulmonary fibrosis and emphysema, idiopathic pulmonary fibrosis, survival rate.

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