INPLASY

Body mass index and Weight Loss as Risk Factors for Poor Outcomes in Patients with Idiopathic pulmonary fibrosis: A Systematic Review and Meta-Analysis

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ADMINISTRATIVE INFORMATION

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 28 November 2023 and was last updated on 28 November 2023.

INTRODUCTION

*R*eview question / Objective This systematic review and meta-analysis aimed to explore the effect of body mass index (BMI) and weight loss on the prognosis of IPF patients.

Condition being studied Body mass index and Weight Loss as Risk Factors for Poor Outcomes in Patients with Idiopathic pulmonary fibrosis.

METHODS

Participant or population 18,343 Idiopathic pulmonary fibrosis patients.

Intervention IPF patients with death、acute exacerbation and hospitalization.

Comparator Normal IPF patients.

Study designs to be included prospective and retrospective studies.

Eligibility criteria (1) prospective or retrospective cohort studies; (2) IPF Diagnosis according to ATS/ERS/JRS/ALAT statement[10-12]: ①excluding other interstitial lung disease (ILD); ② chest high-resolution CT showing usual interstitial pneumonia changes, with assistance from multidisciplinary and lung biopsy if necessary; (3) hazard ratio (HR) and odds ratio (OR) analyzed by Cox proportional hazard model and logistic regression model respectively; (4) English studies.

Information sources PubMed, Embase, Web of science, Scopus, Ovid and Cochrane Library.

Main outcome(s) Death、acute exacerbation and hospitalization.

Quality assessment / Risk of bias analysis Newcastle-Ottawa Quality Assessment Scale (NOS) was used to evaluate the quality of studies.

Strategy of data synthesis Heterogeneity was tested by Cochran's Q statistic and inconsistency value (I2). If $p < 0.05$ or I2$\geq$ 50%, it means remarkable heterogeneity, and the Dersimonian-Laird method should be applied to pool the data; otherwise, inverse-variance method would be chosen.

Subgroup analysis Subgroup analysis was performed based on the type of Cox proportional hazard regression (univariate and multivariable).

Sensitivity analysis The sensitivity analysis was calculated by eliminating every study one by one.

Country(ies) involved China.

Keywords Idiopathic pulmonary fibrosis; body mass index; weight loss; mortality; acute exacerbation; hospitalization.

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