

Efficacy of Nemiralisib in chronic obstructive pulmonary disease: A systematic review

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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 10 December 2023 and was last updated on 10 December 2023.

INTRODUCTION

Review question / Objective The objective of this study was to evaluate the efficacy of Nemiralisib in patients with chronic obstructive pulmonary disease.

Condition being studied As is well documented, chronic obstructive pulmonary disease (COPD) is a major public health challenge. Exacerbations in COPD lead to poor health conditions and frequent episodes of increased systemic and airway inflammation. Immunomodulator drugs have garnered increasing attention as they may reduce the rate of COPD exacerbations. The objective of this study was to evaluate the efficacy of Nemiralisib in patients with COPD.

METHODS

Participant or population Individuals diagnosed with COPD based on defined criteria established by recognized guidelines and accepted by the international academic organization.

Intervention Nemiralisib.

Comparator Control (any comparator, not only placebo).

Study designs to be included Randomized controlled trials.

Eligibility criteria The inclusion criteria: English papers published in academic journals. The

exclusion criteria: (1) Conference abstracts or protocols. (2) Studies with incomplete data.

Information sources Medical databases such as Cochrane Library, EMBASE and PubMed.

Main outcome(s) St George's Respiratory Questionnaire for COPD score, modified Medical Research Council Dyspnea Scale score, COPD Assessment Test score, time to next on-treatment exacerbation, proportion of patients achieving exacerbation recovery, time to exacerbation recovery and rescue medication use, oral corticosteroid use in AECOPD, exacerbation rate, lung function, in terms of forced expiratory volume in one second, specific airway conductance, specific imaging airway wall thickness, distal specific imaging airway volume measured at functional residual capacity, specific imaging airway resistance, low attenuation score and internal airflow lobar distribution in lower pulmonary region.

Data management The Cochrane Collaboration tool was used to assess the risk of bias of the included RCTs.

Strategy of data synthesis In order to identify trends or patterns across studies, the extracted data of the eligible studies were tabulated and compared. Key characteristics, quality, potential bias, and endpoint outcomes of the included studies were narratively summarized. For all extracted outcomes we reported all crude values with measures of effects and confidence interval (CI)/ P-values/ standard errors/ etc, as applicable and if available. The meta-analysis was attempted to perform using Rev Man 5.3 software (Cochrane Collaboration, Oxford, UK) when the study outcomes were sufficiently comparable, and the required data were available for extraction. The I² method was applied to evaluate statistical heterogeneity between the studies, with P 50% regarded as significant heterogeneity. When there was nonsignificant heterogeneity, a fixed-effects model was used. Otherwise, a random-effects model was used. The results were expressed as mean difference (MD) and 95%CI. When different studies used different rating instruments to measure the same outcome the results were expressed as standardized mean difference (SMD) with CI. P<0.05 was considered statistically significant.

Subgroup analysis Patients with eosinophilic exacerbations and patients without eosinophilic exacerbations.

Sensitivity analysis Sensitivity analysis if available.

Country(ies) involved China.

Keywords Nemiralisib, chronic obstructive pulmonary disease, exacerbation, lung function, systematic review.

Contributions of each author

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