

INPLASY

A meta-analysis about standardized incidence ratios of malignancies in polymyositis and dermatomyositis

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Corresponding author:

Rui Luo

luorui2083@qq.com

Author Affiliation:

The First People's Hospital of Longquanyi District Chengdu.

Luo, R¹; Xia, D²; Yuan, RL³.

ADMINISTRATIVE INFORMATION

Support - No.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2023120035

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 December 2023 and was last updated on 08 December 2023.

INTRODUCTION

Review question / Objective The aim of this meta-analysis is to pool SIR of different types of malignancies in PM/ DM.

Rationale We aim to collect observational studies to investigate the SIR of different types of malignancies after diagnosis of PM/DM.

Condition being studied There were two meta-analyses being published in 2015, one aimed at dermatomyositis, another pool RR/SIR together.

*title 1-cancer risk in dermatomyositis: a meta-analysis of cohort studies

*title 2-polymyositis/dermatomyositis and malignancy risk: a meta analysis study there have been eight years without updating.

METHODS

Search strategy The search string will be built as follows: (Polymyositis ; Polymyositides ; Dermatomyositis) and (Tumor; Neoplasm; Tumour; Neoplasia; Malignanc*;) and (standardized incidence ratios). Both MESH terms and Entry terms are included.

Participant or population Patients diagnosed with PM/DM.

Intervention The exposure group includes those patients diagnosed with PM/DM and having melanoma as an outcome factor.

Comparator The comparative group includes those patients diagnosed with PM/DM without malignancies.

Study designs to be included Observational studies.

Eligibility criteria Inclusion criteria:(1) studies containing patients diagnosed with PM/DM and having malignancy as an outcome factor;(2) the publication was in English or Chinese; (3) studies reporting standardized incidence ratio (SIR)Exclusion criteria: (1) conference articles, reviewarticles, editorials, commentaries, hypothesis papers, case reports and letters; (2) multiple publications from thesame population; (3) studies without clear definition of malignancies or PM/DM; and (4) studies with melanoma occurring before PM/DM.

Information sources We will search the following databases:PubMed, Web of Science, EMBASE, CNKI, WANGFANG, VIP.

Main outcome(s) Standardized incidence ratio (SIR)SIR.

Data management Statistical analysis was performed using STATA 16.0.

Quality assessment / Risk of bias analysis Newcastle-Ottawa Scale (NOS) was used to assess the risk of bias according to eight items belonging to three categories: (1) study groups selection, (2) comparability of groups, and (3) outcome of interest.

Strategy of data synthesis Q-test (chi square test) and I² test, were used to test the heterogeneity between the research results during analysis. Estimates were summarized by fixed-effects or random effects models, according to the results of heterogeneity tests. Publication bias was checked by Funnel plot and Egger's test (alpha = 0.1).

Subgroup analysis Subgroup analysis was performed to explore heterogeneity, and we plan to perform subgroup analysis by region, age, or sex, following duration, according to what the original articles provide.

Sensitivity analysis This study considers the combined effects of studies by excluding each individual study one by one for sensitivity analysis. If the removal of a single study has a small impact on the combined effect, it indicates that the research results are stable and reliable. If the removal of a single study has a significant impact on the combined effect, it indicates that the results are unreliable and further analysis of this study is needed.

Language restriction English, Chinese.

Country(ies) involved China.

Keywords Polymyositis, Dermatomyositis, malignancy, risk.

Contributions of each author

Author 1 - RUI LUO.

Email: luorui2083@qq.com

Author 2 - XIA DAN.

Author 3 - RUILI YUAN.