INPLASY

The association between cardiovascular risk factors and lichen sclerosus patients: A systematic review and meta-analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Piloting of the study selection process.

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 12 June 2024 and was last updated on 12 June 2024.

INTRODUCTION

Review question / Objective We aim to assess the association between cardiometabolic risks and lichen sclerosus.

Rationale Lichen sclerosus (LS) is an inflammatory skin disease that has a potential of malignant transformation. Previous reports also show association of LS with comorbidities including diabetic mellitus, hypertension, and dyslipidemia. Hence, this systematic review and meta-analysis aims to assess the association between cardiovascular risk factors and lichen sclerosus.

Condition being studied Lichen sclerosus, cardiovascular risk factors.

METHODS

Search strategy Two researchers will independently search for eligible studies using MEDLINE and EMBASE from initiation to April 2024.

Participant or population Patients with lichen sclerosus who developed cardiovascular risk.

Intervention Patients with lichen sclerosus.

Comparator Patients without lichen sclerosus.

Study designs to be included We will include case-control, prospective or retrospective cohort, and cross-sectional studies.

Eligibility criteria We will include the published articles that fulfill these criteria as follows: (i) types of study are case-control, prospective or retrospective cohort, or cross-sectional studies (ii) patients with lichen sclerosus as the participants (iii) the primary outcomes of interest are the cardiometabolic risks include diabetes mellitus, obesity, hypertension, dyslipidemia, and metabolic syndrome. We exclude review articles, case reports, case series, and non-English publications.

Information sources MEDLINE and EMBASE.

Main outcome(s) – The association between cardiometabolic risks including diabetes mellitus, obesity, hypertension, dyslipidemia, and metabolic syndrome in patients with lichen sclerosus.

Data management The title and abstract of the eligible articles will be independently screened through Covidence. The selected articles will be reviewed through full text. The extraction will be conducted from the included information. Any disagreement during the procedures will be discussed.

Quality assessment / Risk of bias analysis The Newcastle-Ottawa Scale (NOS) will be independently assessed for the quality assessment of the included studies.

Strategy of data synthesis The random effect model will be used. The heterogeneity of this meta-analysis will be conducted using I2 statistics.

Subgroup analysis Not performed. However, we will performed the meta-regression model of patients demographic data against the pooled outcomes if the meta-analysis shows high heterogeneity.

Sensitivity analysis Not performed.

Language restriction English.

Country(ies) involved Thailand.

Keywords Lichen sclerosus; diabtes mellitus; obesity; metabolic syndrome; hypertension; dyslipidemia.

Contributions of each author
Author 1 - Suvijak Untaaveesup - conception, acquisition of data, methodology, interpretation, drafting of the manuscript.
Author 2 - Piyawat Kantagowit - conception, acquisition of data, methodology, interpretation, drafting of the manuscript.
Author 3 - Nattawut Leelakanok - conception, methodology, interpretation, statistical analysis, revision of the manuscript.
Author 4 - Petcharpa Chansate - conception, acquisition of data, methodology, interpretation.
Author 5 - Wongsathorn Eiumtrakul - conception, acquisition of data, methodology, interpretation.
Author 6 - Walaiorn Pratchyapruit - conception, methodology, interpretation, revision of the manuscript.
Author 7 - Chutintorn Sriphrapradang - conception, methodology, interpretation, revision of the manuscript.