INPLASY PROTOCOL

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None declared.

Hormone replacement therapy and risk of carpal tunnel syndrome: a meta-analysis

Worapaka, WM[1]; Pichitchai, PA[2].

Review question / Objective: **Is the any association between increased risk of carpal tunnel syndrome (CTS) and hormone replacement therapy (HRT) used in women?**
Eligibility criteria: **1) cross sectional study, case-control study or randomized controlled trial which reported the association of any type of HRT use and the risk of developing CTS compared to control group; 2) CTS should be diagnosed by medical records, ICD code, clinical diagnosis or other measures (ultrasonography or electrodiagnosis), 3) the risk could be reported as either adjusted or unadjusted odds ratio (OR) or hazard ratio (HR).**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 August 2022 and was last updated on 04 August 2022 (registration number INPLASY202280018).

INTRODUCTION

Review question / Objective: **Is the any association between increased risk of carpal tunnel syndrome (CTS) and hormone replacement therapy (HRT) used in women?**

Rationale: **Recent evidence regarding the association between HRT and CTS risk are still inconclusive. We aimed to perform the systematic review and meta-analysis to clarify the association between CTS and women using HRT.**

Condition being studied: **Women who used HRT.**

METHODS

Search strategy: A comprehensive search in PubMed/Medline, Scopus, Embase and Cochrane databases, will be erformed from their inception to July 2022. The keywords included were "estrogen replacement therapy OR hormone replacement therapy OR estrogen OR hormones OR postmenopausal women" AND "carpal tunnel syndrome".

Participant or population: Postmenopausal women.

Intervention: HRT.

Comparator: non-HRT used.

Study designs to be included: Observational studies or RCT.

Eligibility criteria: 1) cross sectional study, case-control study or randomized controlled trial which reported the association of any type of HRT use and the risk of developing CTS compared to control group; 2) CTS should be diagnosed by medical records, ICD code, clinical diagnosis or other measures (ultrasonography or electrodiagnosis), 3) the risk could be reported as either adjusted or unadjusted odds ratio (OR) or hazard ratio (HR).

Information sources: Electronic databases.

Main outcome(s): The occurrence of CTS reported by eiuther OR or HR.

Quality assessment / Risk of bias analysis: Risk of bias will be performed by NOS.

Strategy of data synthesis: Meta-analysis will be performed using the STATA program version 16.0. (StataCorp LLC, College Station, TX, USA). Pooled OR will be calculated using the logarithm of effect size and standard error from each study. Pooled OR will be calculated using random effect model.

Subgroup analysis: Subgroup will be perfromed by 1. study method 2. whether the data were adjusted or non-adjusted.

Sensitivity analysis: Removing the studies which have different measures of CTS diagnosis.

Language restriction: None.

Country(ies) involved: Thailand.

Keywords: carpal tunnel syndrome, hormone replacement therapy.

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