INPLASY PROTOCOL

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None declared.

Clinical Efficacy of Selenium Supplementation in Patients with Hashimoto's Thyroiditis: A Systematic Review and Meta-Analysis

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Review question / Objective: **P:Patients with Hashimoto's Thyroiditis; I:Selenium Supplementation; O:TSH, fT3, fT4, TPOAb, TgAb; S:RCT.**
Condition being studied: **The investigators wanted to evaluate changes in antibodies and thyroid function in the treatment of Hashimoto's thyroiditis with selenium supplementation.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 October 2022 and was last updated on 21 October 2022 (registration number INPLASY2022100085).

INTRODUCTION

Review question / Objective: **P:Patients with Hashimoto's Thyroiditis; I:Selenium Supplementation; O:TSH, fT3, fT4, TPOAb, TgAb; S:RCT.**

Condition being studied: **The investigators wanted to evaluate changes in antibodies and thyroid function in the treatment of Hashimoto's thyroiditis with selenium supplementation.**

METHODS

Search strategy: **The databases of CNKI, Wanfang,VIP, CBM, PubMed, Web of science, Embased, and Cochrane library were searched for randomized controlled trials on selenium and Hashimoto's thyroiditis.English search terms include:**

"Autoimmune Thyroiditides", "Thyroiditis, Autoimmune", "Thyroiditides, Autoimmune", "Hashimoto Thyroiditis", "HT", "AIT", "Se", "Selenium", "Randomized Controlled Trialrandomized", etc.

Participant or population: Patients with Hashimoto's Thyroiditis.

Intervention: Selenium Supplementation.

Comparator: The experimental group received selenium supplementation, alone or in combination with LT4 (levothyroxine), while the control group received only placebo or combined with LT4 or no treatment.

Study designs to be included: RCT.

Eligibility criteria: Systematic reviews, reviews, meta-analyses, case reports, meeting records were excluded.

Information sources: All the information was retrieved from eight databaseseight databases.

Main outcome(s): TSH, fT3, fT4, TPOAb, TgAb.

Quality assessment / Risk of bias analysis: Funnel figure.

Strategy of data synthesis: Revman software was used to analysis.All continuous variables data were extracted as mean ± standard deviation (SD) and the 95% confidence interval (CI).If the measurement unit was not uniform among different samples, the standardized mean difference (SMD) was used.When P>0.05 or I2<50%, the heterogeneity among the included studies was not statistically significant, then a fixed-effect model was applied. When P<0.05 or I2≥50%, the heterogeneity among the included studies was considered to be statistically significant, a random effects model was used.

Subgroup analysis: None.

Sensitivity analysis: The sensitivity analysis was carried out by excluding the literatures one by one.

Country(ies) involved: China.

Keywords: Selenium; Hashimoto's Thyroiditis (HT); Meta-analysis.

Contributions of each author:
Author 1 - Heng Zhang.
Author 2 - Zhelong Liu.
Author 3 - Yang yang.