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None declared.

The prevalence of overactive bladder in Chinese women: a systematic review and meta-analysis

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Review question / Objective: **Overactive bladder (OAB) affects the patient's psychology, employment, family relationships, body and sexual life to varying degrees, which must be paid attention to by doctors and patients. However, trends in the prevalence of OAB in Chinese women remain unclear. This systematic review and meta-analysis aimed to estimate the prevalence of OAB in Chinese women.**
Eligibility criteria: **The study included all published studies investigating the prevalence of OAB in Chinese women, regardless of race or age, and the outcome measure was the prevalence of OAB. We excluded non-Chinese and English studies, multiple publications, meta-analyses, systematic reviews, conference papers, animal studies, and studies for which original data were not available.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 February 2023 and was last updated on 12 February 2023 (registration number INPLASY202320047).

INTRODUCTION

Review question / Objective: **Overactive bladder (OAB) affects the patient's psychology, employment, family relationships, body and sexual life to varying degrees, which must be paid attention to by doctors and patients. However, trends in the prevalence of OAB in Chinese women remain unclear. This systematic review and meta-analysis aimed to estimate the prevalence of OAB in Chinese women.**

Condition being studied: **Overactive bladder (OAB) refers to a series of bladder diseases represented by urinary urgency, usually accompanied by nocturia and**

urinary frequency, with or without urge incontinence. OAB has a serious impact on people's lives, and a considerable number of patients are forced to reduce drinking water to cope with OAB. Although the exact pathogenesis of OAB is still unclear, it is believed that the etiology and pathogenesis of OAB will gradually become clear with the deepening of the research on the neural regulation of urination activity. However, OAB affects the patient's psychology, employment, family relationships, body and sexual life to varying degrees, which must be paid attention to by doctors and patients. Studies have shown that the prevalence of OAB varies widely in women aged 18 years and older, ranging from approximately 17% to 43% in Europe and the United States, ranging from approximately 1.9% to 53.8% in Asia. Relevant reports also demonstrated that OAB has different effects on patients' quality of life (QOL) and leads to high medical costs. China's huge population may have a large number of OAB patients, and reliable estimates of OAB prevalence are necessary. This estimate may have particular practical implications for guiding OAB control and prevention. Because of China's large population, even small progress in OAB prevention management can significantly improve the health of the population. Therefore, we performed a systematic review and meta-analysis to reliably estimate the prevalence and epidemiological characteristics of OAB in China.

METHODS

Search strategy: PubMed, EMbase, The Cochrane Library, CBM, CNKI, WanFang Data and VIP databases were searched to collect articles on the prevalence of OAB in Chinese women. The search time was from the establishment of the database to July 21, 2022. After 2 reviewers independently screened articles, extracted data, and assessed the quality of included studies, Meta-analysis was performed using Stata 16.0 software, and the prevalence was obtained using a random-effects model.

Participant or population: Chinese women.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: The study included all published studies investigating the prevalence of OAB in Chinese women, regardless of race or age, and the outcome measure was the prevalence of OAB.

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Information sources: PubMed, EMbase, The Cochrane Library, CBM, CNKI, WanFang Data, and VIP databases were searched for articles on the prevalence of OAB in Chinese women.

Main outcome(s): The prevalence of OAB in Chinese women.

Quality assessment / Risk of bias analysis: The quality of the articles was evaluated using the quality evaluation criteria for cross-sectional studies recommended by the Agency for Healthcare Research and Quality (AHRQ), which included 11 items. If it is "No" or "Unclear", it will be scored 0 points, and "Yes" will be scored 1 point. The higher the score, the higher the quality of the literature.[13] The above quality assessment was assessed after two researchers discussed. The evaluation was continued by 2 investigators, and a third party adjudicated in case of disagreement. Scores ≤ 5 are considered low quality.

Strategy of data synthesis: Two researchers independently screened the articles according to the inclusion and exclusion criteria, and then extracted the data of the included articles for cross-checking, and a third party adjudicated if

there were disagreements. Article information, including title, author, year of publication, study type, time of study , area of study, study subjects and sources, age, Body Mass Index (BMI), diagnostic criteria, sample size, and prevalence, was extracted. Meta-analysis was performed with Stata 16.0 software. The heterogeneity among the results of the included studies was analyzed by the Q test (the test level was α=0.1), and the magnitude of the heterogeneity was quantitatively judged with I2. According to I2 statistics, heterogeneity is divided into less than 25% (low heterogeneity), 25-75% (moderate heterogeneity) and more than 75% (high heterogeneity).[15] A random-effects model was used for meta-analysis to calculate the prevalence of OAB in Chinese women. Subgroup analyses were performed to identify potential sources of heterogeneity, with subgroup categories including age, BMI, region, and survey year.

Subgroup analysis: A random-effects model was used for meta-analysis to calculate the prevalence of OAB in Chinese women. Subgroup analyses were performed to identify potential sources of heterogeneity, with subgroup categories including age, BMI, region, and survey year.

Sensitivity analysis: Not applicable.

Country(ies) involved: China.

Keywords: overactive bladder, Chinese women, prevalence, systematic review, meta-analysis.

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