INPLASY PROTOCOL

To cite: Chen et al. Discontinuation Rate with Tadalafil Alone or in Combination with a-Blockers for Treatment of Male Lower Urinary Tract Symptoms with or without coexisting Erectile Dysfunction. Inplasy protocol 202260105. doi: 10.37766/inplasy2022.6.0105

Received: 27 June 2022

Published: 27 June 2022

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Support: **None.**

Review Stage at time of this submission: **Completed but not published.**

Conflicts of interest:
None declared.

Discontinuation Rate with Tadalafil Alone or in Combination with a-Blockers for Treatment of Male Lower Urinary Tract Symptoms with or without coexisting Erectile Dysfunction

Chen, Q[1]; Mao, YJ[2]; Zhou, HL[3]; Tang, SX[4].

Review question / Objective: **We examined the discontinuation rate with tadalafil alone or in combination with a-blockers (ABs) for treatment of male lower urinary tract symptoms (LUTS) with or without Erectile Dysfunction (ED).**
Eligibility criteria: **The studies were chosen using the following inclusion criteria: (1) Subjects reporting intake of LUTS therapy used tadalafil monotherapy or combination therapy (CT) with ABs, (2) Study reports patient discontinuing a medication, regardless of reason, (3) LUTS patients with or without coexisting ED, and (3) Observational, prospective, retrospective, randomized clinical trials (RCTs) and meta-analysis on humans in English language were included. There were no restrictions on drug dose, sample size, and follow-up duration. Reviews, commentaries, case reports, case series, and non-human studies were excluded.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 June 2022 and was last updated on 27 June 2022 (registration number INPLASY202260105).

INTRODUCTION

Review question / Objective: **We examined the discontinuation rate with tadalafil alone or in combination with a-blockers (ABs) for treatment of male lower urinary tract symptoms (LUTS) with or without Erectile Dysfunction (ED).**

Condition being studied: **Discontinuation therapy associated with LUTS medication (tadalafil alone or in combination with ABs).**

METHODS

Participant or population: **Patients reporting intake of LUTS therapy used**

tadalafil monotherapy or combination therapy with ABs.

Intervention: The discontinuation treatment of tadalafil alone or in combination with ABs for LUTS with or without EDD is continuation treatment.

Comparator: Not applicable.

Study designs to be included: Observational, prospective, retrospective, randomized clinical trials (RCTs) and meta-analysis on humans in English language were included.

Eligibility criteria: The studies were chosen using the following inclusion criteria: (1) Subjects reporting intake of LUTS therapy used tadalafil monotherapy or combination therapy (CT) with ABs, (2) Study reports patient discontinuing a medication, regardless of reason, (3) LUTS patients with or without coexisting ED, and (3) Observational, prospective, retrospective, randomized clinical trials (RCTs) and meta-analysis on humans in English language were included. There were no restrictions on drug dose, sample size, and follow-up duration. Reviews, commentaries, case reports, case series, and non-human studies were excluded.

Information sources: A comprehensive search was conducted using Scopus, Medline, PubMed, Web of Science, EMBASE, and ClinicalTrials.gov. In addition, a manual search of references in the retrieved articles ensured the identification of studies that were not found in the initial literature search.

Main outcome(s): The purpose of this study was to measure the discontinuation rate of the main treatment drug (tadalafil alone or in combination with ABs) for LUTS. Discontinuation was defined as non-persistent of the main treatment drug prescribed at the start of the first treatment, regardless of the reasons. The discontinuation rate was determined by dividing the number of discontinuation patients by the total number of initially index patients. Furthermore, the discontinuation rate due to adverse events (AEs) was defined by including only discontinuation patients because of AEs in the numerator. Similarly, the discontinuation rate due to no efficacy was defined by including only discontinuation patients because of ineffective against drugs in the numerator.

Quality assessment / Risk of bias analysis: Bias assessments of observational studies were rated on the Newcastle-Ottawa Scale, while randomized studies were evaluated using the Cochrane risk of bias assessment tool.

Strategy of data synthesis: Because heterogeneity among the included studies was relatively large due to the various clinical and methodological perspectives in the rate study, we adopted a random-effects model, which was used to obtain a pooled estimate and 95% CI for dropout rate, and an arcsine transformation was conducted to stabilize the variance. Heterogeneity was assessed using Cochran's I2 and Q. The heterogeneity test was truncated at significant Cochran Q-values ($P < 0.1$) and $I2 > 50\%$, because an I2 of 30–50% has been recommended as a truncation value for moderate heterogeneity.

Subgroup analysis: Subgroup analyses were conducted according to drug regimens (monotherapy or CT), (fixed-dose combination [FDC] or free-dose combination), study designs (prospective observational study, retrospective observational study, or RCT), and causes of treatment discontinuation (AEs or insufficient/poor efficacy).

Sensitivity analysis: We performed a sensitivity analysis to test the reliability of the results.

Country(ies) involved: China.

Keywords: Tadalafil; Discontinuation; LUTS; Combination; ABs; ED.

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