

INPLASY PROTOCOL

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None declared.

INTRODUCTION

Review question / Objective: To determine whether TURP have undesirable effect on subsequent RARP regarding to safety, quality of life, and prognosis remains unclear.

The Safety, Quality of Life and Prognosis in Men Consecutively Undergoing Robotic-Assisted Radical Prostatectomy After Transurethral Resection of The Prostate: A Systematic Review and Meta-analysis

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Review question / Objective: To determine whether TURP have undesirable effect on subsequent RARP regarding to safety, quality of life, and prognosis remains unclear.

Condition being studied: It is not uncommon to incidentally discover prostate cancer during the transurethral resection of the prostate (TURP) and necessitate a subsequent robotic-assisted radical prostatectomy (RARP). However, the influence TURP on subsequent RARP regarding to safety, quality of life, and prognosis remains unclear. This systematic review and meta-analysis are conducted to elucidate these topics.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 January 2023 and was last updated on 19 January 2023 (registration number INPLASY202310062).

Condition being studied: It is not uncommon to incidentally discover prostate cancer during the transurethral resection of the prostate (TURP) and necessitate a subsequent robotic-assisted radical prostatectomy (RARP). However, the influence TURP on subsequent RARP

regarding to safety, quality of life, and prognosis remains unclear. This systematic review and meta-analysis are conducted to elucidate these topics.

METHODS

Search strategy: We searched MEDLINE, EMBASE, and the Cochrane Library from 1998 to November 2022 that met our criteria for inclusion. The search terms were (“TURP” OR “transurethral resection” OR “enucleation”) AND (“robotic OR “robot” OR “robot assisted”) AND (“radical prostatectomy”).

Participant or population: The patients who undergoing a robotic-assisted radical prostatectomy are included.

Intervention: The patients who undergoing a robotic-assisted radical prostatectomy are divided in two groups. Group 1: patients undergoing transurethral resection of the prostate before. Group 2: patients without a history of transurethral resection of the prostate before.

Comparator: With or without a history of transurethral resection of the prostate before.

Study designs to be included: RCTs and retrospective studies.

Eligibility criteria: The following requirements should be satisfied by the chosen studies: (1) randomized controlled trials, prospective or retrospective cohort study; (2) compared robot-assisted radical prostatectomy patients with previous TURP (TURP Group) to patients without TURP (no-TURP Group); (3) reported at least one surgical, functional or oncological outcomes of interest; (4) studies relied on a mixed surgical cohort (robot-assisted, laparoscopic, open) were excluded; (5) Letters to the editor, reviews, case-series and case-reports were not considered, and (6) in the event when studies focusing on the same population, the more informative of the information was included.

Information sources: MEDLINE, EMBASE, and the Cochrane Library.

Main outcome(s): The surgical outcomes of interest were operative time, estimated blood loss (EBL), time to catheter removal, length of hospital stay (LOS), overall complications, major complications, bladder neck construction and neurovascular bundle (NVB) sparing rate. The functional outcomes included urinary incontinence and potency at one year. Either incontinence or potency reported within one year or at the last follow-up were not extracted for analysis. The oncological outcomes were positive margin and biochemical recurrence rates (BCR).

Quality assessment / Risk of bias analysis: The quality of individual included studies was assessed based on the Downs and Black tool. Begg's funnel plot and Egger's test were used to evaluate the possibility of publication bias.

Strategy of data synthesis: The presence of heterogeneity between studies were calculated by the Chi-square-based Q test and I². An I² value > 50% accompanied with P value < 0.05 was considered to indicate substantial heterogeneity, in which case, the pooled effect was calculated by a random-effects model (the DerSimonian and Laird method). Otherwise, the fixed effects model (Mantel-Haenszel method) was used for the meta-analysis.

Subgroup analysis: None.

Sensitivity analysis: For pooled outcomes with significant heterogeneity, sensitivity analyses were performed to explore the potential effect of heterogeneity by eliminating studies that did not use propensity scoring matching.

Language restriction: No.

Country(ies) involved: China.

Keywords: Robotic-Assisted Radical Prostatectomy, Transurethral Resection of The Prostate, Meta-analysis.

Contributions of each author:

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