

Appendix 1

1) PubMed (searched 2025-11-02)

((“Ureteral Calculi”[Mesh] OR ureteral calculi[tiab] OR ureteric stone*[tiab]
OR ureteral stone*[tiab] OR distal ureter*[tiab] OR ureter* colic[tiab]))
AND
 (“Adrenergic alpha-1 Receptor Antagonists”[Mesh]
OR adrenergic alpha-1 receptor antagonist*[tiab]
OR alpha-blocker*[tiab] OR tamsulosin[tiab] OR silodosin[tiab] OR alfuzosin[tiab]))
AND
 (“Phosphodiesterase 5 Inhibitors”[Mesh]
OR phosphodiesterase type 5 inhibitor*[tiab] OR PDE5 inhibitor*[tiab]
OR tadalafil[tiab] OR sildenafil[tiab] OR vardenafil[tiab]))
AND
(randomized controlled trial[pt] OR randomized[tiab] OR randomised[tiab]
OR placebo[tiab] OR trial[tiab])

2) Embase (Ovid syntax; searched 2025-11-02)

1. exp ureteral calculus/
2. (ureter\$ adj3 (stone\$ or calcul* or colic)).ti,ab,kw.
3. distal ureter\$.ti,ab,kw.
4. 1 or 2 or 3
5. exp adrenergic alpha 1 receptor antagonist/
6. (alpha-blocker\$ or tamsulosin or silodosin or alfuzosin or doxazosin).ti,ab,kw.
7. 5 or 6
8. exp phosphodiesterase 5 inhibitor/
9. (phosphodiesterase adj3 5 adj3 inhibitor\$ or PDE5\$ or tadalafil or sildenafil or vardenafil).ti,ab,kw.
10. 8 or 9
11. randomized controlled trial/ or random\$.ti,ab.
12. 4 and 7 and 10 and 11
13. limit 12 to human
14. limit 13 to yr="1974 - 2025"

3) Cochrane Library (CENTRAL; searched 2025-11-02)

#1 MeSH descriptor: [Ureteral Calculi] explode all trees
#2 (ureter* near/3 (stone* OR calcul* OR colic)): ti,ab,kw
#3 (distal near/3 ureter*): ti,ab,kw
#4 #1 OR #2 OR #3
#5 MeSH descriptor: [Adrenergic alpha-1 Receptor Antagonists] explode all trees
#6 (alpha-blocker* OR tamsulosin OR silodosin OR alfuzosin): ti,ab,kw
#7 #5 OR #6
#8 MeSH descriptor: [Phosphodiesterase 5 Inhibitors] explode all trees
#9 (“phosphodiesterase 5” OR PDE5 OR tadalafil OR sildenafil OR vardenafil): ti,ab,kw
#10 #8 OR #9
#11 #4 AND #7 AND #10
#12 Publication Year from 1990 to 2025

4) Web of Science Core Collection (SCI-EXPANDED & ESCI; searched 2025-11-02)

TS = (

(ureter* NEAR/3 (stone* OR calcul* OR colic) OR “distal ureter*”)

)

AND TS = (

“alpha-blocker*” OR “adrenergic alpha-1 receptor antagonist”

OR tamsulosin OR silodosin OR alfuzosin

)

AND TS = (

“phosphodiesterase 5” OR PDE5 OR tadalafil OR sildenafil OR vardenafil

)

Refined by: DOCUMENT TYPES=(ARTICLE OR CLINICAL TRIAL)

Timespan: 1990–2025; Languages=(English OR Chinese)

Indexes: SCI-EXPANDED, SSCI, ESCI

5) CNKI (中国知网; 搜索于 2025-11-02)

主题 = (输尿管结石 OR 远端输尿管结石)

AND 主题 = (α 受体阻滞剂 OR α 1受体拮抗剂 OR 坦索罗辛 OR 西洛多辛 OR 阿夫唑嗪)

AND 主题 = (PDE5抑制剂 OR 磷酸二酯酶5抑制剂 OR 他达拉非 OR 西地那非 OR 伐地那非)

文献类型 = 期刊; 学科 = 医学; 年限 = - 2025-11-02; 语言 = 中文/英文

6) Wanfang 及 VIP (维普; 搜索于 2025-11-02)

标题/关键词/摘要 = (输尿管结石 OR 远端输尿管结石)

AND 标题/关键词/摘要 = (α 受体阻滞剂 OR 坦索罗辛 OR 西洛多辛 OR 阿夫唑嗪)

AND 标题/关键词/摘要 = (PDE5抑制剂 OR 他达拉非 OR 西地那非 OR 伐地那非)

年限: 建库–2025-11-02; 语言: 中文/英文; 类型: 期刊/随机对照临床研究优先

Table S1 List of excluded full-text studies with reasons

Study (first author, year)	Reason for exclusion	Specific details
Sadanala 2023	Ineligible study population/indication	Evaluated auxiliary treatment post-shockwave lithotripsy (SWL) rather than primary medical expulsive therapy (MET)
Tharwat 2018	Ineligible study population/indication	Evaluated the relief of ureteral stent-related symptoms rather than spontaneous stone passage
Bhattar 2017	Ineligible study population/indication	Evaluated the ease of negotiation of a large ureteroscope prior to surgery rather than primary MET
Capitanio 2013	Ineligible study population/indication	Evaluated lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH) rather than ureteral stones
Ahmed 2020	Ineligible study design	Non-randomized controlled trial (comparative observational study design)
Abdelaal 2023	Ineligible intervention/comparator	Compared monotherapies only (tamsulosin vs. silodosin vs. tadalafil) without a combination therapy group
Falahatkar 2021	Ineligible intervention/comparator	Compared monotherapies only (tamsulosin vs. tadalafil)
Gur 2021	Ineligible intervention/comparator	Compared monotherapies only (dexketoprofen vs. tamsulosin vs. silodosin vs. tadalafil)
Goyal 2018	Ineligible intervention/comparator	Compared monotherapies only (Tamsulosin vs. Tadalafil).
Kc 2016	Ineligible intervention/comparator	Compared monotherapies only (tamsulosin vs. tadalafil)
Puvvada 2016	Ineligible intervention/comparator	Compared monotherapies only (tadalafil vs. tamsulosin)
Kumar 2015	Ineligible intervention/comparator	Compared monotherapies only (tamsulosin vs. tadalafil vs. silodosin)
Diab 2025 (Optimum)	Ineligible intervention/comparator	Compared two combination therapies (silodosin + tadalafil vs. silodosin + vardenafil) without a standard monotherapy control group
Reda 2024	Ineligible intervention/comparator	The control group received a PDE5 inhibitor alone (Tadalafil) rather than a standard alpha-blocker monotherapy