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Introduction & Objectives: Infectious complications after ureteroscopy (URS) is not uncommon and is a cause of significant morbidity. There is a wide variation on the rates of complications across the literature. We report on a systematic review of literature looking at the post-URS infectious complications and risk factors associated with it.

Materials & Methods: A systematic review was conducted based on Cochrane and PRISMA standards for all studies reporting on post-URS infectious complications from Jan 1990 to Dec 2019. English language articles reporting on >100 patients were reviewed using PubMed, EMBASE, CINAHL, Cochrane library and Google Scholar.

Results: A total of 433 articles were initially identified of which 56 were selected after initial screening and review of titles. A further 40 studies were excluded after review of abstracts and full texts, leaving 16 studies for our review. A total of 27,681 patients were identified with a mean complication rate of 8.9% (range: 3.5%-29%) and an infection complication rate of 5.5% (range: 0.6%-18.3%). Prolonged operative time, pre-stented patients, those with multiple comorbidities and a history of pre-operative UTIs and bacteriuria were identified as risk factors for infectious complications.

Author	Year	Sample size	Tot complications %	Infective Complications %	Clavien Dindo classification
Bapat et al	2007	394	ns	4.9%	Clavien I -IIIb
Hyams et al	2010	120	7%	2%	Clavien II
Sohn et al	2013	531	ns	3.80%	Clavien II
Martov et al	2014	8148	6%	1.70%	Clavien I-IV
De la Rosette et al	2014	11885	3.50%	1.80%	Clavien II
Komori et al	2015	219	4.20%	1.40%	Clavien I -IIIb

Moses et al	2016	550	8.50%	3.40%	Clavien II
Blackmur et al	2016	462	10%	7.40%	Clavien II
2016	266	15%	7.40%	Clavien II	Clavien II -IV
Giusti et al	2016	316	29%	9.80%	
Berardinelli et al	2016	403	7.70%	7.70%	Clavien II
Mitsuzuka	2016	153	25.50%	18.30%	Clavien I-IV
Bloom et al	2017	345	7%	4.30%	Clavien II
Salsiccia et al	2018	308	5.10%	0.60%	Clavien I -IIIb
Fankhauser et al	2018	283	7.40%	6.40%	Clavien II -IV
Sothorn et al	2019	3298	6.90%	6.90%	Clavien II

Conclusions: Based on our literature review, there is a wide variation in the reported post-URS infectious complications. Pre-operative optimisation, treatment of UTIs, shorter operative duration and decreasing the stent dwell time are important factors to minimize them.