

Supplementary material

Table S1. Characteristics of studies included in the meta-analysis

Study and year of publication	Study design	Country	Study population	Sample	Testing methods of genital mycoplasmas	Species	Prevalence of genital mycoplasmas	
							Case (HIV +)	Control (HIV -)
Cunha et al. 1998	Cross-sectional	Brazil	- 24 male patients (HIV +) - 24 male volunteers (HIV -)	Urethral swabs	Culture + PCR	- <i>U. urealyticum</i> - <i>M. hominis</i>	-6/24: <i>U. urealyticum</i> -2/24: <i>U. urealyticum</i> + <i>M. hominis</i>	-4/24: <i>U. urealyticum</i> -3/24: <i>U. urealyticum</i> + <i>M. hominis</i>
Hussain et al. 1999	Cross-sectional	USA	-15 children (HIV +) -15 controls (HIV -)	Urine specimens	Culture + PCR	- <i>U. urealyticum</i> - <i>M. hominis</i>	4/15: <i>M. hominis</i> 3/15: <i>U. urealyticum</i> + <i>M. hominis</i>	3/15: <i>U. urealyticum</i> + <i>M. hominis</i>
Martinelli et al. 1999	Cross-sectional	Italy	-187 male heterosexual HIV-1-positive patients -114 healthy male volunteers	Urethral swabs	Culture	<i>U. urealyticum</i>	23/187	8/114
Cordova et Cunha, 2000	Cross-sectional	Brazil	-106 adult male patients infected by HIV-1, without clinical symptoms of urethritis. -110 adult HIV-negative men attending a STD clinic, with symptoms of urethritis.	-Urethral swabs -Urine samples	Culture and PCR	<i>M. hominis</i> and <i>U. urealyticum</i>	-8/106: <i>M. hominis</i> -20/106: <i>U. urealyticum</i>	-1/110: <i>M. hominis</i> -15/110: <i>U. urealyticum</i>
Govender et al. 2009	Cross-sectional	South Africa	-20 HIV-positive women. -199 HIV-negative women.	Endocervical swab	PCR	<i>M. hominis</i> and <i>U. urealyticum</i>	-5/20: <i>M. hominis</i> -2/20: <i>U. urealyticum</i>	-71/199: <i>M. hominis</i> -27/199: <i>U. urealyticum</i>
Manhas et al. 2009	Cross-sectional	India	-70 HIV-positive patients with nongonococcal urethritis.	Endo-urethral swabs	Culture	<i>M. hominis</i> and <i>U. urealyticum</i>	-10/70: <i>M. hominis</i> -13/70: <i>U. urealyticum</i>	-1/30: <i>M. hominis</i>

			- 30 HIV- negative patients with nongonococcal urethritis.				-4/70: <i>M. hominis</i> + <i>U. urealyticum</i>	-7/30: <i>U. urealyticum</i> -1/30: <i>M. hominis</i> + <i>U. urealyticum</i>
Djigma et al. 2011	Cross-sectional	Italy	-251 HIV-positive women -200 HIV-negative women	Vaginal and cervical swabs	Culture	<i>M. hominis</i> and <i>U. urealyticum</i>	-42/251: <i>M. hominis</i> -41/251: <i>U. urealyticum</i> -33/251: <i>M. hominis</i> + <i>U. urealyticum</i>	-11/200: <i>M. hominis</i> -0/200: <i>U. urealyticum</i> -0/200: <i>M. hominis</i> + <i>U. urealyticum</i>
Ghosh et al. 2011	Cross-sectional	India	-100 HIV-positive patients (64 males and 36 females) - 50 HIV-negative healthy volunteers (35 males and 15 females)	First-void urine	Culture and PCR	<i>M. hominis</i> and <i>Ureaplasma spp.</i>	-1/100: <i>M. hominis</i> -6/100: <i>U. urealyticum</i>	-0/50: <i>M. hominis</i> -1/50: <i>U. urealyticum</i>
Wang et al. 2012	Cross-sectional	China	- 210 HIV/AIDS patients - 245 healthy volunteers	-First-void urine (men) -Endocervical swabs (women)	Culture	<i>M. hominis</i> and <i>U. urealyticum</i>	-107/210: <i>U. urealyticum</i> -69/210: <i>M. hominis</i>	-83/245: <i>U. urealyticum</i> -38/245: <i>M. hominis</i>
Zhao et al. 2019	Cross-sectional	China	-36 HIV-positive men who have sex with men - 147 HIV-negative men who have sex with men	Rectal swabs	PCR	<i>M. hominis</i> and <i>U. urealyticum</i>	-2/36: <i>U. urealyticum</i> -6/36: <i>M. hominis</i>	-6/147: <i>U. urealyticum</i> -8/147: <i>M. hominis</i>
Henri et al. 2020	Case-control	Cameroon	- 96 HIV+ women - 40 HIV- women	Cervical samples	Culture	<i>M. hominis</i> and <i>U. urealyticum</i>	-19/96: <i>U. urealyticum</i> -2/96: <i>M. hominis</i> -31/96: <i>M. hominis</i> + <i>U. urealyticum</i>	-7/40: <i>U. urealyticum</i> -0/40: <i>M. hominis</i> -16/40: <i>M. hominis</i> + <i>U. urealyticum</i>

Nava-Memije et al. 2021	Cohort-prospective study	Mexico	- 267 HIV+ women - 82 HIV- women	Cervicovaginal samples	Culture	<i>M. hominis</i> and <i>U. urealyticum</i>	-87/267: <i>U. urealyticum</i> -11/267: <i>M. hominis</i> -38/267: <i>M. hominis</i> + <i>U. urealyticum</i>	-27/82: <i>U. urealyticum</i> -1/82: <i>M. hominis</i> -2/82: <i>M. hominis</i> + <i>U. urealyticum</i>
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Table S2. Newcastle-Ottawa quality assessment scale for cross-sectional studies

Study	Selection				Comparability for the most important factor and for any additional factor	Outcome		Quality score
	Representativeness of the sample	Sample size	Non-respondents	Ascertainment of the exposure		Assessment of the outcome	Statistical test	
Cunha et al. 1998	★	0	0	★	★	★★	★	6 (Fair)
Hussain et al. 1999	★	0	0	★	★	★★	★	6 (Fair)
Martinelli et al. 1999	★	0	0	★	★★	★★	★	7 (Good)
Cordova et Cunha, 2000	★	0	0	★	★	★★	★	6 (Fair)
Govender et al. 2009	★	0	0	★	★	★★	★	6 (Fair)
Manhas et al. 2009	★	0	0	★	★	★★	★	6 (Fair)
Djigma et al. 2011	★	0	0	★	★★	★★	★	7 (Good)
Ghosh et al. 2011	★	0	0	★	★★	★★	★	7 (Good)
Wang et al. 2012	★	0	0	★	★	★★	★	6 (Fair)
Zhao et al. 2019	★	0	0	★	★★	★★	★	7 (Good)

Table S3. Newcastle-Ottawa quality assessment scale for the case-control study

Study	Selection				Comparability based on the design or analysis controlled for confounders	Outcome			Quality score
	Is the case definition adequate?	Representativeness of the cases	Selection of controls	Definition of controls		Ascertainment of outcome	Same method of ascertainment for cases and controls	Non-response rate	
Henri et al. 2020	★	★	0	★	★★	★	★	0	7 (Good)

Table S4. Newcastle-Ottawa quality assessment scale for the cohort study

Study	Selection				Comparability of cohorts on the basis of the design or analysis controlled for confounders	Outcome			Quality score
	Representativeness of the case cohort	Selection of the control cohort	Ascertainment of outcome	Demonstration that outcome of interest was not present at start of study		Assessment of the outcome	Was follow-up long enough for outcomes to occur	Adequacy of follow-up of cohorts	
Nava-Memije et al. 2021	★	★	★	★	★★	★	0	0	7 (Good)

Table S5. Subgroup analysis

Species	Moderators	Subgroups	Number of studies	OR (95% CI) p	Heterogeneity	Difference between subgroups
<i>Ureaplasma</i> spp.	Period of publication	< 2010	5	1.322 (0.851-2.055) p = 0.214	I ² = 0 % p = 0.624	p = 0.449
		≥ 2010	6	1.619 (1.219-2.151) p = 0.001	I ² = 61.74% p = 0.023*	
	Study design	Case-control	1	1.163 (0.446-3.031) p = 0.757	ND	p = 0.134
		Cohort	1	0.985 (0.581-1.668) p = 0.954	ND	
		Cross-sectional	9	1.765 (1.336-2.333) p = 0.000	I ² = 34.67% p = 0.141	
	Continent	Africa	2	1.010 (0.449-2.269) p = 0.982	I ² = 0% p = 0.587	p = 0.163
		Asia	4	1.809 (1.284-2.549) p = 0.001	I ² = 13.5% P = 0.325	
		Europe	2	2.537 (1.134-5.674) p = 0.023	I ² = 84% P = 0.012*	
		North America	3	1.167 (0.775-1.757) p = 0.458	I ² = 0% p = 0.596	
<i>M. hominis</i>	Period of publication	< 2010	3	1.337 (0.567-3.157) p = 0.507	I ² = 70% p = 0.034*	p = 0.100
		≥ 2010	6	2.913 (2.057-4.127) p = 0.00	I ² = 0% p = 0.983	
	Study design	Case-control	1	2.143 (0.101-45.638) p = 0.625	ND	p = 0.955
		Cohort	1	3.480 (0.443-27.371) p = 0.236	ND	
		Cross-sectional	7	2.597 (1.870-3.607) p = 0.00	I ² = 40.64% p = 0.120	
	Continent	Africa	2	0.688 (0.254-1.861) p = 0.461	I ² = 0% p = 0.441	p = 0.035*
		Asia	4	2.796 (1.862-4.2) p = 0.00	I ² = 0% p = 0.9	
		Europe	1	3.453 (1.728-6.9)	ND	

<i>Ureaplasma</i> spp. + <i>M.</i> <i>hominis</i>	Period of publication			p = 0.00		p = 0.559
		North America	2	5.522 (1.269-24.023) p = 0.023	I ² = 0% p = 0.532	
		< 2010	3	0.982 (0.320-3.019) p = 0.975	I ² = 0% p = 0.793	
	Study design	≥ 2010	3	1.447 (0.751-2.790) p = 0.269	I ² = 86% p = 0.001*	p = 0.023*
		Case-control	1	0.715 (0.333-1.535) p = 0.390	I ² = 0% p = 0.9	
		Cohort	1	6.638 (1.566-28.124) p = 0.01	I ² = 0% p = 0.9	
	Continent	Cross- sectional	4	1.743 (0.615-4.939) p = 0.296	I ² = 60.9% p = 0.053	p = 0.022*
		Africa	1	0.715 (0.333-1.535) p = 0.39	ND	
		Asia	1	1.758 (0.188-16.417) p = 0.621	ND	
		Europe	1	61.481 (3.742-1010.002) p = 0.004	ND	
		North America	2	2.790 (0.886-8.785) p = 0.08	I ² = 73.26% p = 0.053	
		South America	1	1 (0.167-5.985) p = 0.9	ND	

ND: Not Defined

*: significant value

Table S6. Leave-one-out sensitivity analysis of the included studies in this meta-analysis

Species	Study excluded	OR (95% CI), p
<i>U. urealyticum</i>	Govender et al. 2009	1,556 (1,222-2,981), p = 0,000
	Manhas et al. 2009	1,588 (1,242-2,029), p = 0,000
	Nava-Memije et al. 2021	1,709 (1,307-2,233), p = 0,000
	Henri et al. 2020	1,553 (1,214-1,988), p = 0,000
	Zhao et al. 2019	1,529 (1,201-1,946), p = 0,001
	Cordova et Cunha. 2000	1,532 (1,190-1,973), p = 0,001
	Cunha et al. 1998	1,522 (1,194-1,973), p = 0,001
	Martinelli et al. 1999	1,500 (1,169-1,924), p = 0,001
	Wang et al. 2012	1,464 (1,130-1,720), p = 0,001
	Ghosh et al. 2011	1,512 (1,189-1,923), p = 0,001
	Djigma et al. 2011	1,482 (1,166-1,884), p = 0,001
<i>M. hominis</i>	Cordova et Cunha. 2000	2,534 (1,828-3,512), p = 0,000
	Govender et al. 2009	3,040 (2,165-4,266), p = 0,000
	Djigma et al. 2011	2,415 (1,677-3,478), p = 0,000
	Ghosh et al. 2011	2,624 (1,897-3,630), p = 0,000
	Henri et al. 2020	2,616 (1,891-3,619), p = 0,000
	Manhas et al. 2009	2,572 (1,855-3,565), p = 0,000

	Nava-Memije et al. 2021	2,591 (1,869-3,593), p = 0,000
	Wang et al. 2012	2,552 (1,606-4,056), p = 0,000
	Zhao et al. 2019	2,545 (1,817-3,563), p = 0,000
<i>U. urealyticum</i> + <i>M. hominis</i>	Cunha et al. 1998	1,409 (0,778-2,552), p = 0,258
	Djigma et al. 2011	1,113 (0,624-1,984), p = 0,718
	Henri et al. 2020	1,754 (0,683-2,911), p = 0,119
	Hussain et al. 1999	1,352 (0,744-2,456), p = 0,323
	Manhas et al. 2009	1,285 (0,716-2,309), p = 0,401
	Nava-Memije et al. 2021	0,977 (0,527-1,808), p = 0,940