

SYPHILIS AND HIV: characteristics of the co-infection in patients newly diagnosed with HIV

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Introduction

- The reported cases of syphilis in Europe have been on the rise since 2010, specially in groups with sexual practices of higher risk, such as men who have sex with men (MSM) and sex workers. According to the most recent European data (2015), the rate of new reported cases of syphilis in Portugal was of 3 to 7 cases per 100 000 population¹.
- Additionally, the physiopathological interaction between the *Treponema pallidum* and the human immunodeficiency virus (HIV) may have direct implications in the course of the HIV if the syphilis isn't treated, causing rises in the plasmatic levels of HIV and decrease in the lymphocyte T CD4+ count.

Objectives

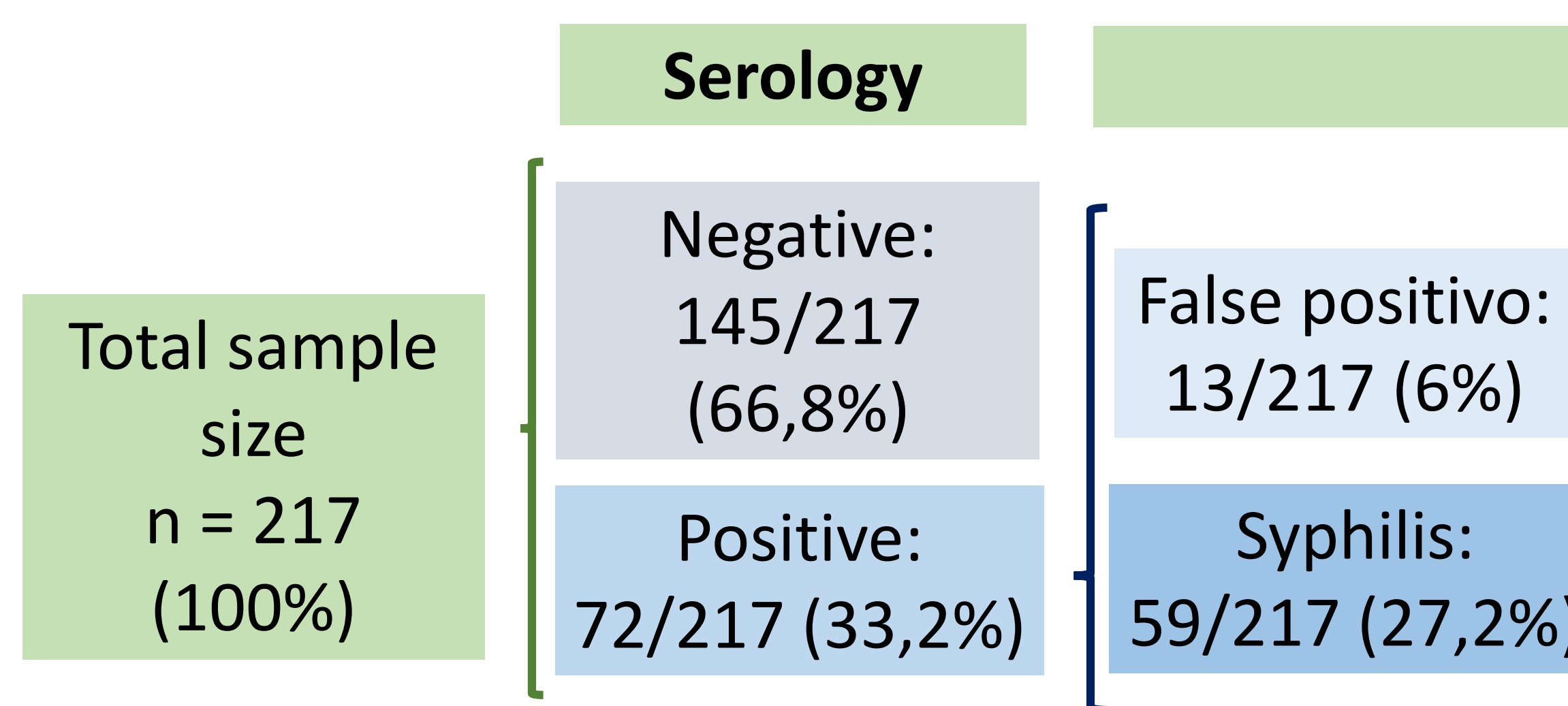
- To know the frequency and stages of the disease caused by *Treponema pallidum* by the time of the HIV diagnosis; to identify possible risk factors for the acquisition of syphilis.

Material & Methods

- Retrospective observational study. We reviewed all patients that were newly diagnosed with HIV in our outpatient HIV clinic between January 2015 to December 2017. In our clinic, we use the TPPA ("Treponema Pallidum Particle Agglutination Assay") for the initial screening of syphilis. If positive, we do the VDRL test ("Venereal Disease Research Laboratory"). For discordant results, we confirm the diagnosis with FTA-ABS ("Fluorescent treponemal antibody absorption test").

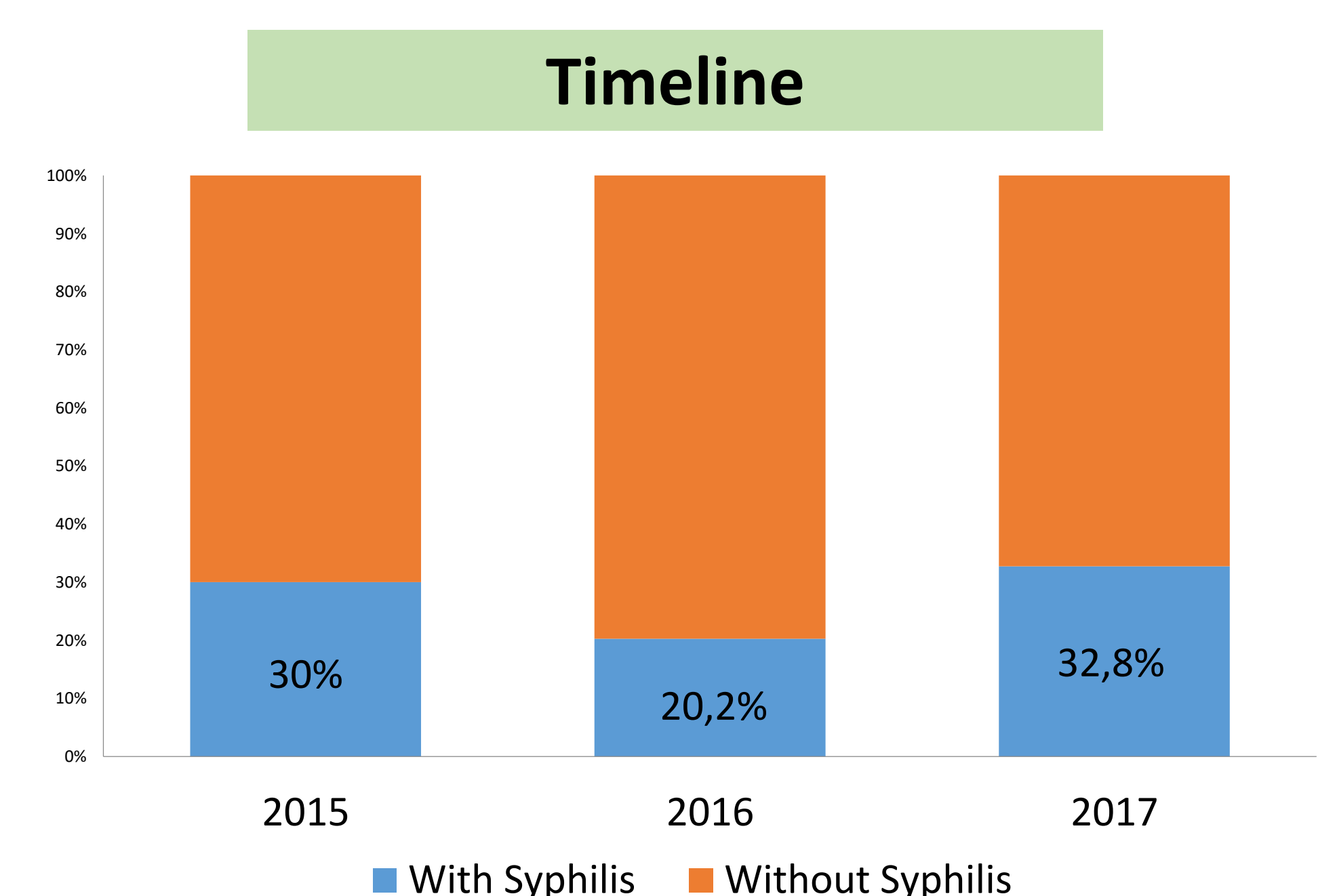
Results

Patients Characteristics n = 217	
Men	168 (77,4%)
Age (Median; IQR)	39 (20,1)
Risk	
- Heterosexual	108 (49,8%)
- MSM	97 (44,7%)
- Injection Drug Users	5 (2,3%)
- Others	0 (0%)
- Unknown	7 (3,2%)
Symptoms at diagnosis	
- Primary infection	18 (8,3%)
- Assymptomatic	155 (71,4%)
- AIDS	47 (21,7%)
HIV type	
- HIV-1	213 (98,2%)
- HIV-2	4 (1,8%)
Initial CD4+ count (median)	327
Initial CD4+ count < 200/mm³	83 (38,2%)
200-349/mm³	35 (16,1%)
> 350/mm³	99 (45,6%)



Risk factors			
	With syphilis (n=59)	Without syphilis (n=158)	p
Gender			
- Male	49 (83,1%)	120 (75,9%)	0,21
- Female	10 (16,9%)	38 (24,1%)	
Age (Median ± SD)	41 ± 12,8	42 ± 13,3	0,871
Risk			
- Heterosexual	19 (32,2%)	88 (55,7%)	0,013
- MSM	37 (62,7%)	57 (36,1%)	
- Injection Drug Users (IDU)	2 (3,4%)	3 (1,9%)	
- Others	0 (0%)	0 (0%)	
- Unknown	1 (1,7%)	10 (6,3%)	
Risk			
- MSM vs Hetero			0,04
- IDU vs Hetero			0,266
- MSM vs IDU			0,096
Symptoms at diagnosis			
- Primary infection	6 (10,2%)	12 (7,6%)	
- Assymptomatic	41 (69,5%)	111 (70,3%)	
- AIDS	12 (20,3%)	35 (22,2%)	
Initial CD4+ count			
< 200/mm ³	23 (38,9%)	59 (37,3%)	0,847
200-349/mm ³	10 (16,9%)	26 (16,5%)	
> 350/mm ³	26 (44,1%)	73 (46,2%)	

Diagnosis		Classification n=59	
Past infection:	22/217 (10,1%) 22/59 (37,3%)	Primary syphilis	7 (18,9%)
Active infection:	37 /217 (17,1%) 37/59 (62,7%)	Secondary syphilis	1 (0,03%)
		Early latent syphilis	5 (13,5%)
		Late latent syphilis	20 (54,1%)
		Neurosyphilis	3 (0,08%)
		Retinitis	1 (0,03%)



Conclusion

- The prevalence of syphilis was of 27,2%, with a frequency that remained stable throughout the years of follow-up. The association between the syphilis diagnosis and the MSM group reinstates that we need to improve our screening tools and sensibilization campaigns in this group of individuals. Further studies in our clinic intend to see which of these patients get re-infected and if we can use the syphilis screening as a marker for risk of other sexually transmitted diseases.

¹ European Centre for Disease Prevention and Control. Syphilis. In: ECDC. Annual epidemiological report for 2015. Stockholm: ECDC; 2017

². Mulhall BP, Wright ST, De La Mata N, Allen D, Brown K, Dickson B, Grotowski M, Jackson E, Petoumenos K, Foster R, Read T. Risk factors associated with incident sexually transmitted infections in HIV-positive patients in the Australian HIV observational database: A prospective cohort study. HIV medicine. 2016 Sep;17(8):623-30.