

CHLAMYDIA TRACHOMATIS INFECTION IN PATIENTS SELECTED FOR HPV DETECTION

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Conclusion

No correlation between HPV-CT coinfection and clinical signs was observed. However, further long-term studies are needed to elucidate the effects of HPV-CT coinfection in the clinical history of the infected patient, which would greatly contribute towards a better management of patients.

Background

The significance of the association between the human papillomavirus (HPV) and other sexually transmitted infections in the development of cervical, penile or anal neoplasias has been investigated, and the more consistent data have pointed to an association with Chlamydia trachomatis (CT). In Portugal, the lack of information on STI precludes any knowledge on this subject. The objective of this study was to determine CT infection in a group of individuals selected for HPV detection in the major Portuguese STD clinic.

Material and Methods

This opportunistic screening was performed in 179 outpatients, 148 women and 31 men, suspected of HPV infection (warts, cytological abnormalities, previous HPV infection, infected sexual partner) between 2008 and 2010. Demographic and sexual behaviour data and a full medical history were obtained at enrolment. Genital samples (102 cervical, 52 vulvar, 4 perianal, 16 penile, 14 anal) were collected from all the subjects. HPV DNA was detected by CLART HPV2 assay, which allows the detection of 35 genotypes, and CT DNA was detected by Cobas 4800.

Results

A total of 148 women (19-53 years; mean age: 28.0 years) and 31 men (16-61 years; mean age: 33.3 years) were studied. Overall, 70.4% (126/179) of the individuals had at least one of the infections, evidencing an excellent correlation with clinical signs. Infection by at least one agent was observed in 70.3% of the women and in 71.0% of the men. HPV infection was detected in 68.2% of the women and in 71.0% of the men, where CT positivity was 10.1% and 16.1%, respectively. Coinfection was observed in 8.8% of the women and in 16.5% of the men (Table 2). HPV infection was significantly more frequent in CT negative (87.3%) than in CT positive women (12.7%), and the same was observed for men (77.3% versus 22.7%) (Table 3). Multiple HPV infections were more frequent in CT-negative women (89.8%) and in CT-negative men (83.3%). In women, the most frequent HPV genotypes were HPV 6 (21.5%) followed by HPV 16 (10.7%), 51 (6.8%), 53 (6.8%) and 61 (4.9%) (HR-HPV: 56.6%; LR-HPV: 43.4%). Among CT-positive women the most frequent genotype was HPV 6. HPV 6 and 11 (52.8%) were the most frequent genotypes among CT-negative and positive men (HR-HPV: 33.3%; LR-HPV: 66.7%). No correlation with HPV or CT genotypes could be established.

Table 2:

Positivity	Total % (N=179)	Women % (N=148)	Men % (N=31)
HPV	69.3 (124)	68.2 (101)	71.0 (22)
CT	11.2 (20)	10.1 (15)	16.1 (5)
HPV and CT	11.1 (18)	8.8 (13)	16.1 (5)

Table 3:

HPV infection	CT infection	
	Positive	Negative
Women		
Positive	13	89
Negative	2	44
Men		
Positive	5	17
Negative	0	9

Table 1: Characteristics of the studied population

Variables	Women (N=148)	Men (N=31)
Age group, in years		
< 19	24	1
20-24	38	4
25-29	28	9
30-34	25	8
35-39	13	1
40-44	13	3
> 45	7	5
Country of birth		
Portugal	109	24
Other than Portugal	39	7
Sexual orientation		
Heterosexual	144	16
MSM	1	15
Bisexual	3	0
No. of sexual partners in the last 6 months		
0	3	0
1	116	18
2-4	27	11
≥ 5	2	2
Previous IST		
Yes	12	2
No	136	29
HIV infection		
Yes	2	0
No	107	28
ND	39	3
Concomitant IST		
Yes	22	7
No	126	24
Cytological results		
NILM	78	0
ASC-US	13	0
LSIL	16	0
ND	41	31
Clinical signs		
Condylomatous lesions	91	25
Other	18	1
No	39	5