



**44° CONGRESSO NAZIONALE
DELLA SOCIETÀ ITALIANA
DI MICROBIOLOGIA**

SIM 2016

**Pisa, Palazzo dei Congressi
25 - 28 settembre 2016**



Abstract Book

CONCORDANCE AND DISTRIBUTION OF HPV GENOTYPES IN HPV INFECTED SEXUAL COUPLES

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Introductions: The characteristics of HPV infection in women have been extensively investigated, however, only a few studies have analyzed the characteristics of HPV infection in men and in sexual couples.

Materials and methods: 195 sexual couples positive for HPV-DNA were examined, at the Virology laboratory of the Department of Sciences for Health Promotion and Mother and Child Care (Policlinico, University of Palermo, Italy). HPV-DNA detection was performed by the INNOLiPA HPV Genotyping Extra II Test (Fujirebio) and nested PCR/sequencing method.

All women (range: 20-60, mean age: 31.5 ys) had performed a pap smear and knew the cytological diagnosis: 73 (37.4%) negative at Pap smear, 21 (10.8%) with atypical squamous cell of undetermined significance (ASCUS), 82 (42.1%) with low grade squamous intraepithelial lesion (LSIL), 18 with high grade squamous intraepithelial lesion (HSIL) and 1 carcinoma. For ease of computation, these two latter categories were grouped together, and thus represented a total of 19 cases of \geq HSIL (9.7%). As for the partners (range 20-70; mean age: 36.7 ys) only two had genital warts.

Results: 36 types of HPV were identified: 27 were present in both men and women, two (HPV-67, -90) only in women and seven types (HPV-43, -81, -82, -83, -87, -91, -107) only in men.

Infection with or containing high risk HPV types (HR-HPV) was in 112/195 (57.4%) women and in 57/195 (29.2%) men; low risk HPV types (LR-HPV) was in 17/195 (8.7%) women and in 32/195 (16.4%) men. Multiple infections was in 66/195 (33.8%) women and in 106/195 (54.4%) men. Mostly frequent types, the same in men and women, were: HPV-16 (27.7% and 21% respectively), HPV-51 (13.8% and 19%), and -66 (13.8% and 18.5%).

HPV-group specific (HR or LR) concordance between sexual partners was found in 163/195 (83.6%; 95%CI=[78.4-88.8]) couples.

HPV-type specific concordance was found in 99/195 (50.8%; 95%CI=[43.8-57.8]) couples, of which 82 (82.8%) shared one types, 12 (12.1%) two types and 4 (4.1%) three types, 1 (1%) four types. Cytological diagnosis was not statistically significantly associated neither with HPV-group specific concordance ($p=0.206$) nor with HPV-type specific concordance ($p=0.312$).

Conclusions: partners of positive women represent a population at high risk of infection and in turn can be a source of (re)infection to the partner. Studied are needed to improve knowledge of the natural history of HPV infection in sexual couples, to control viral transmission and provide adequate counseling to HPV infected sexual partners.