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ABSTRACT BOOK

210 - Oral potentially malignant disorders (OPMDs): HPV prevalence and vaccines

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Oral potentially malignant disorders (OPMDs): HPV prevalence and vaccines

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Introduction

Oral potentially malignant disorders (OPMDs) are a heterogeneous group of oral conditions (e.g., leukoplakia, lichen planus, and erythroplakia), which can lead to the onset of oral squamous cell carcinoma (OSCC). Oro-genital transmission of human papillomavirus (HPV), one of the most common sexually transmitted pathogens, appears to play a role in the development of these pathologies. Furthermore, the influence of HPV vaccines on oral HPV infection in general and OPMDs prevention specifically is still unclear. The study aims to evaluate the prevalence of HPV and the potential impact of vaccines in a cohort of OPMD patients.

Materials and methods

The study examined 313 oral rinses from patients with OPMDs. The clinical diagnosis confirmed by histological examination was carried out at the Oral Medicine and Anatomic Pathology Units, Polyclinic Hospital of Palermo. HPV detection and genotyping were performed by INNO-LiPA HPV Genotyping Extra II kit (Fujirebio) at the Microbiology and Virology Unit, Polyclinic Hospital of Palermo. The statistical analysis made it possible to calculate impact estimates respectively as the presence of vaccine genotypes, alone or in association, but excluding the presence of another type of HPV (low impact estimate), or in the presence of another type of HPV (high impact estimate).

Results

The patients’ cohort exhibited leukoplakia and lichen planus as the most common diagnoses, with rates of 49.2% (154/313) and 46.3% (145/313), respectively. The overall HPV prevalence was 11.2% (35/313), mainly represented by single infections, detected in 91.4% (32/35). HrHPVs were found in 71.4% (25/35), while the most common types were HPV16 (40%), HPV6 (25.7%), HPV18 (11.4%) and HPV51 (8.6%). The two groups showed HPV prevalence rates of 13.6% (21/154) in leukoplakia patients and 9% (13/145) in lichen planus subjects. Vaccine impact evaluation showed no significant

differences between vaccines' high impact estimates. Conversely, the comparison of low-impact estimates showed how quadrivalent and nonavalent ones were significantly higher than the bivalent one (bivalent vs quadrivalent: 48.6% vs 68.6%, bivalent vs nonavalent: 48.6% vs 77.1%).

Discussion and conclusions

The prevalence found in our study falls in the wide range from 0% and 85% described in the literature, but it is lower than the pooled prevalence of 22.5% shown by de la Cour et al. The identification of HPV16 as the prevalent type is explained by the high numbers of lichen planus and leukoplakia diagnoses in our group, which Shang et al. described as strongly correlated with HPV16/18 infections. Concerning vaccines' impact, quadrivalent and nonavalent vaccines have proven to be more effective than the bivalent ones in potentially counteracting HPV oral infection.

229 - Cervical lesions and HPV oral infection: is there a relation?

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Cervical lesions and HPV oral infection: is there a relation?

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Introduction

Human papillomavirus (HPV) infection is the most common sexually transmitted disease (STD) in both sexes worldwide. Persistent HPV infection, usually with high-risk genotypes (hrHPV), is a potential risk factor for the development of cervical high-grade squamous intraepithelial lesions (HSIL) and cervical cancer and head and neck squamous cell carcinoma (HNSCC). There is no confirmed evidence of cervical-oral transmission, and the link between oral and cervical HPV infection is still debated. This study aims to evaluate the potential association between cervical alterations and possible viral transmission to the oral cavity in women with suspected HPV infection.

Materials and Methods

A total of 281 female patients were tested for cervical and oral HPV infection at the Microbiology and Virology Unit (Polyclinic Hospital “P. Giaccone”, Palermo, Italy). Oral rinses and cervical scrapings were provided for each patient, and HPV detection and genotyping were performed using the INNO-LiPA HPV Genotyping Extra II kit (Fujirebio). Pap test results were available for all the patients.

Results

The prevalence of cervical and oral HPV was 73.7% (207/281) and 7.1% (20/281), respectively. Among the cervical-positive women, 32.9% (68/207) had multiple infections and 67.1% (139/207) had a single infection, while hrHPV genotype infection was found in 87.0% (180/207) of cases. In contrast, only single infections occurred in the oral-positive women, and 65.0% (13/20) hrHPV genotype infections were found. In addition, 95% (19/20) of the oral-positive women had a concurrent cervical infection, i.e., simultaneous HPV infection in the cervix and oral cavity. In particular, concordance between detected hrHPV genotypes was found in 57.9% (11/19), and type-specific concordance of both low-risk genotypes (lrHPV) and hrHPV genotypes was found in 54.5% (6/11). According to the Pap test result, 57.9% (11/19) of women with concurrent infection had cervical cytological abnormalities, of which 10.5% (2/19) were HSIL, while the remaining 42.1% (8/19) were negative for cervical lesions.

Discussion and Conclusions

There are few studies examining the concurrency and concordance of cervical and oral HPV infection. In this study, nearly 60% of infections affecting both the cervical and oral sites

simultaneously show a cervical abnormality on the Pap smear. The data is absolutely preliminary given the small number of concomitant infections. It will be necessary to expand the cohort of patients to establish a possible association between infection of both sites and greater severity of lesions, and to clarify the possible role on cervical-oral transmission.