

Lopez-Diez E. ¹, Castro M. ¹, Tortolero Blanco L.J. ², Diaz Alvarez J.M. ¹, Sanchez J. ¹, López S. ¹, Perez Schoch M. ¹, Montero R. ¹, Carballo M. ¹, Almuster S. ¹, Perez S. ³

¹Hospital Alvaro Cunqueiro, Dept. of Urology, Vigo, Spain, ²Hospital Imed Levante, Dept. of Urology, Benidorm, Spain, ³Hospital Alvaro Cunqueiro, Dept. of Microbiology, Vigo, Spain

Introduction & Objectives: HPV infection is the most frequent sexual infection in the world and men constitute a reservoir of the disease, especially in high-risk population. Gardasil 9 has been shown to prevent cancers and other diseases caused by 9 types of HPV. From October 2018, Gardasil 9 has been approved for use up to age 45, in male and woman, to prevent persistent infection, genital warts and precancerous lesions. The objective of this study is to describe the fraction attributable to HPV genotypes targeted by nonavalent vaccines according to age in high-risk (HR) male population: male sexual partners of women presenting high-grade cervical intraepithelial neoplasia, infected by oncogenic HPV. As a secondary end-point we calculate absolute additional attributable fraction of nonavalent vaccine in comparison with quadrivalent vaccine.

Materials & Methods: Men were prospectively recruited within the first six months after diagnosis of cervical lesions in their female partners (n=175). Detection and genotyping of HR-HPV infection in genital samples from the coronal sulcus, glans penis shaft and scrotum was performed with a Linear Array HPV Genotyping Test. Two approaches were used to estimate the attribution of individual genotype to HPV male infection: Minimum Estimate for single infection and Hierarchical attribution estimate for multiple infection. Age group 1, 2 and 3 included men 18 to 34, 35-44 and 45 years old respectively. Absolute additional fraction attributable to genotypes targeted by nonavalent vaccine compared to genotypes targeted by quadrivalent vaccine was calculated as the increment of attributable cases with respect to all infected cases. EPIDAT 3.1 was used.

Results: The prevalence of HR-HPV infection in men was 45.1% (79/175) and the prevalence of genital warts was 10,3%. Average age was 38.7 (ST± 8.7). Multiple HR-HPV genotypes were observed in 58.2% (46/79) of the subjects. HPV genotype 16 was the most popular genotype in the sample 46,8% (37/79). Fraction of HR-HPV infection attributable to nonavalent genotypes was 70% in male between 18-34 years old; 78% between 35-44 years old and 78% in ≥45 years old. Absolute additional attributable fraction of HR-HPV infection was observed for all age group for the nonavalent vaccine in comparison to quadrivalent vaccine.

Conclusions: The nonavalent vaccine would benefit all ages in our high-risk population, and can prevent a man from constituting a reservoir of infection and transmitting and reinfecting his partner.