

# High prevalence of oncogenic human papillomavirus 18 among Brazilian women with normal cervical cytology.

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Infection with high-risk human papillomavirus (HR-HPV) is an essential cause of cervical cancer. The five most prevalent HPV strains in women with and without cervical neoplastic diseases are HPV16, 18, 31, 52, and 58. HPV16/18 is the predominant oncogenic HR-HPV genotypes, causing approximately 70% of global cervical cancer cases, including Brazil. Because of substantial geographical variation in the HPV genotype distribution, data regarding HPV type-specific prevalence are mandatory for providing baseline information to estimate effectiveness of currently HPV-vaccines. We searched for HPV type specific prevalence in 101 women; 94 with normal cervical cytology; 4 women with atypical squamous cells of undetermined significance (ASCUS), 3 women with low-grade squamous intraepithelial lesion, aged 15-80 years registered from October, 2014 to June, 2015. Logistic regression using generalized estimating equations was used to assess risk factors of HR-HPV vs. other oncogenic types. Liquid-based cytology specimens were tested for 35 HPV types using CLART HPV2 genotype microarray system. Overall prevalence of HPV-DNA was 36.3% being highest (57.14%) in women  $\leq 30$  years and decreasing to 12.5% at age  $\geq 60$ . Seventeen different HPV types were identified. Type-specific oncogenic HR-HPV18 has highly frequent in the studied population (24/101, 23.76%). Five (4.9%) of the HPV 18-infected women showed multiple HPV types infection, including others HR-HPV (HPV 35, 51 and 59) and low-risk HPV (HPV 61, 70 and 83). HR-HPV 18 was found in 19/101 (18.8%) women with normal cytology, 1.0% with ASCUS and 50% with LSIL. HPV 16 was only identified in one (1.0%) volunteer. To our knowledge, this study is the most comprehensive assessment of the overall prevalence and distribution of HPV genotypes in women living in a neglected community and without clinical cervical neoplasia. Based on our findings, we highly recommend the administration of existing prophylactic vaccines to younger women before sexual debut.

**Key-words:** human papilloma virus, prevalence, neglected population

**Financial Support:** Instituto Nacional e Infectologia Evandro Chagas, Fiocruz