Molecular detection of human papillomavirus in Brazilian women with cervical intraepithelial neoplasia in a northeast Brazilian city

J.D.C. Nunes[1], F.C.B. Vidal[1], C.T.L. Ferraro[2], M.B.C. Chein[1], L.M.O. Brito[1] and S.C.M. Monteiro[1]

[1]Programa de Pós-Graduação em Saúde Materno-Infantil, Universidade Federal do Maranhão, São Luís, MA, Brasil
[2]Programa de Pós-Graduação em Oncologia, Instituto Nacional de Câncer, Rio de Janeiro, RJ, Brasil

Corresponding author: J.D.C. Nunes
E-mail: jomdiogo@yahoo.com.br

ABSTRACT. We examined the prevalence of human papillomavirus (HPV) infection in Brazilian women with cervical intraepithelial neoplasia. Our goal was to identify the types of HPV and their association with risk factors. This prospective cross-sectional study included 97 samples collected from women aged 14-79 years at the public health units of gynecological care in São Luís, MA, Brazil. HPV detection was performed by nested polymerase chain reaction and sequence analysis. The study patients completed a structured questionnaire to provide information regarding their socio-demographic, clinical, and behavioral status. HPV prevalence was found to be 80.4%, with 17 virus types detected, including HPV 16, 18, 58, 6, and 11. Significant associations between HPV infection and age and frequency of doctor visits were identified. The study findings indicate the significance of age and low frequency of visits to the gynecologist as risk factors for genital HPV infection, suggesting that HPV infection-derived cervical cancer could

be prevented through orientation programs for women, which include sex education and information regarding screening tests. We also found an increased prevalence of high-risk HPV serotypes in cervical lesions, which reveals an association between cervical lesions and high-risk HPV.

Key words: Human papillomavirus; Polymerase chain reaction; Risk factors; Uterine cervical neoplasms