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TLR-9 and CD1d Expression in Mexican Patients with Human Papilloma Virus Infection

Leonardo Josué Castro Muñoz[1], Eduardo Sauer Ramirez[1], Pilar Acosta Ruiz[1], Mario García Solís[3], Virgina Sánchez Monroy[1], Consuelo Gómez García[1], Rodolfo Ocádiz Delgado[2], Olivia Medel Flores[1], David Guillermo Pérez Ishiwara[1, 4]

[1]Laboratorio de Biomedicina Molecular I, Programa Institucional de Biomedicina Molecular, Escuela Nacional de Medicina y Homeopatía, IPN, 07320 México, DF.

[2]Department of Genetics and Molecular Biology, Cinvestav.

[3]Hospital General Tlahuac. Distrito Federal SSA. [4]Centro de Investigación en Biotecnología Aplicada CIBA Tlaxcala, 90700 México.

Abstract: During the early stages of HPV infection, the components of the innate immune response are the first line of defense. Receptors as the TLR-9 and cells as the NKT, which are activated specifically by CD1d receptor, are able to identify and to eliminate infected cells; these molecules are also important components for the correct activation of adaptive immune response against virus. In this respect, there are few studies determining the role of innate immune response in early stages of HPV infection. Therefore, the objective of this study was to determine the expression of TLR-9 and CD1d in samples from Mexican patients with cervical intraepithelial neoplasia grade I (CIN-I), positive to HPV infection. Results from multiplex PCR demonstrated that 11 patients showed multiple infections, 10 presented infection with HPV-31, the most common among the high risk type, while 4 presented only low risk 11 type. On the other hand, TLR-9 and CD1d that are expressed in the basal epithelium of non-infected tissue, were detected in the cytoplasm of the upper epithelium, while no expression was found in cells of the basal layer, suggesting a diminished activity of the innate immune response during HPV viral infection.

Keywords: Human papilloma virus, Toll-like receptor, NKT cells, cervical intraepithelial neoplasia.

Corresponding author: David Guillermo Pérez Ishiwara
ishiwaramx@yahoo.com.mx