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Galectin-9 as a potential biomarker of immune reconstitution inflammatory syndrome in HIV+ patients who begin antiretroviral therapy**L Ramon-Luing, L Vazquez-Bolaños, G Reyes-Teran, J Bañales-Mendez and I Sada Ovalle**
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Immune reconstitution inflammatory syndrome (IRIS) is an important complication in HIV+ patients who begin antiretroviral therapy (ART); it could be a paradoxical deterioration or unmasking of infections after ART. It has been estimated that this syndrome occurs in 10-50% of HIV+ patients during the first 3 months of antiretroviral treatment. Our goal was to study the profile of markers associated with infection and immunological dysfunction in HIV+ patients and to elucidate their potential predictive and diagnostic value as IRIS biomarkers. Sixty-seven HIV+ patients naïve to treatment were enrolled. T cell activation (HLA DR, CD38 and Glut-1) and exhaustion (Tim-3) markers were analyzed on CD8+ T cells at baseline (pre-ART), 8 weeks after ART and at the IRIS events gene expression of Tim-3, Galectin-9, Glut-1, CXCL10 and Granulysin was analyzed by real time PCR. Plasma concentration of IP-10, IFN- γ and Galectin-9 was measured by ELISA assay. Among the HIV+ patients, 13 (27%) developed IRIS. At baseline HIV+ patients who lately developed IRIS showed an increased expression of Tim-3, and Glut-1 receptors on T cells compared with those IRIS-. A highly activated phenotype (CD38, Glut-1, HLA-DR, Tim-3expression) was also identified in HIV+IRIS+ patients. 9+ patients even the soluble protein at level only, while Glut-1 expression was constant in all times. Our data suggest that longitudinal measurements of T cell activation and exhaustion markers should be included alongside HIV-1 mRNA levels. RNA level of Galectin-9 and soluble protein (on plasma) could be an indicative of IRIS on patients who begin ART.

Biography

L Ramon-Luing completed her PhD in the field of Engineering/Biochemistry with focus in Biotechnology (Research Center and Advanced Studies, CINVESTAV). She did a Post-doctoral training in the field of Trichomonosis (CINVESTAV) and Tuberculosis (Institute of Biomedical Research, UNAM). Since 2013, she has been a Researcher in Medical Sciences at the National Institute of Respiratory Diseases and she is Member of the National Research System of Mexico. Till date she has published 8 papers; currently she began her study on HIV and respiratory diseases.

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