TITLE: COOPERATIVE RESPONSE OF VCAM1 AND VLA4 RELATED TO THE T CELLS MIGRATION IN LIVER INJURIES OF HUMAN FATAL CASES AFFECTED BY YELLOW FEVER VIRUS

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ABSTRACT:

Yellow fever (YF) remains an important tropical infection disease, and recent outbreaks brought YF again to the fore due to factors as the existence of vector populations spread as well as a human and non-human primate population susceptible to the virus. Thus, the yellow fever virus (YFV) still causing outbreaks in all regions where it is endemic and spreading to previously unaffected areas. Although many studies have described and focused on the clinical manifestations and histological liver changes, little known about the participation of in situ immune response and how the immunological mechanisms are related to the evolution of the YF in human. It is known which the migration process of inflammatory cells is one of the most important steps for an effective immune response, thus we performed an analysis of the molecule expression of VCAM-1 and your ligand, VLA-4, in liver tissue fragments of 21 patients afflicted with severe YF and deaths because of it. The tissue fragment was submitted to the immunohistochemistry analyze for immunolabeling with specific monoclonal VCAM-1 and VLA-4 antibodies. The immunolabeling for VLA-4 and VCAM-1 antibodies showed a significantly higher number of endothelial cells stained in the portal tract when compared to other zones (Z1, Z2 and Z3) (p < 0.0001). As the expression of adhesion molecules was significantly increased when compared to controls in all areas including the room door. These data suggest which the adhesion molecules expression seem to be determinant to regulate a standard response of T cells that can be associated with a Th1 profile responsible for inhibiting viral replication or Th2 that facilitates viral replication and the tissue repair in the liver parenchyma of fatal cases affected by the YFV.

Keywords: Adhesion molecules, Cell migration, Yellow Fever

Development Agency: SAARB/IEC/MS – Seção de Arbovirologia e Febres Hemorrágicas, Instituto Evandro Chagas, Ministério da Saúde.