

TITLE: E-SELECTIN AND P-SELECTIN LEUCOCITARY MIGRATION IN HEPATIC INJURIES OF HUMAN FATAL CASES INFECTED WITH YELLOW FEVER VIRUS

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ABSTRACT:

Yellow fever (YF) is a viral infection caused by an RNA virus member of the genus Flavivirus. YF is a zoonotic disease which occurs mainly in Latin America and Africa and transmitted by vector, mosquito or ticks. The yellow fever virus (YFV) triggers a complex relationship between pathogen-host based mainly on immunopathological aspects. The selectins play an important role in the evolution of the immune response in the liver, being these essential molecules for recruitment, capture, and displacement of inflammatory cells to the tissue. This study performed an expression analysis of E-selectin and P-selectin in severe cases of patient's death due to the YFV infection. We analyzed 21 fragments of hepatic tissue by immunohistochemistry analysis for immunolabeling tissue using specific monoclonal P-selectin and E-selectin antibodies. The number of immunolabeled endothelial cells for these cytokines were significantly higher ($p < 0.0001$) in infected samples compared to controls. The quantitative analysis showed an average number of 90.13 ± 11.18 cells/mm² and $136.8 \pm 8,960$ mm² of E-selectin and P-selectin cells immunolabeling, respectively, in portal tract region characterized by the presence of inflammatory infiltrate. Thus, our results indicate which the E-Selectin and P-Selectin expression can be directly linked to a cellular cascade that correlate to mediate the endothelial cells activation and induce the construction of inflammatory infiltrate as well as the accession of a varied set of cells of innate and adaptive immunity responsible for producing cytokines as INF- α and IFN- β which can inhibit the YFV replication in liver parenchyma cells of human fatal cases.

Keywords: Yellow Fever, Selectin, Cell migration.

Development Agency: CNPq, CAPES.