ANALYSIS OF ANTI-DENGUE ANTIBODIES FREQUENCY IN DIVINÓPOLIS/MG

Batalha, ICC¹; Camargos VN¹; Miranda VC¹; Dutra KR¹; Santos LL¹; Coelho LFL²; Ferreira JMS¹

¹Laboratório de Microbiologia e Laboratório de Biologia Molecular, Universidade Federal de São João

Del-Rei, Divinópolis/MG (campus CCO, 400 sebastião gonçalves coelho street, chanadour,

Divinopólis, Minas Gerais, Brazil, zip code: 35.501-296).

² Laboratório de Vacinas, Universidade Federal de Alfenas/MG (700 Gabriel Monteiro da Silva street,

Centro, Alfenas, Minas Gerais, Brazil, zip code: 37130-000).

Dengue is considered one of the most important problems in public health in urban tropical and

subtropical regions. Brazil has more than 70% of the registered cases in the American continent, and

approximately 60% of the cases registered worldwide. In this context, this study aimed to evaluate the

frequency of antibodies IgM and IgG anti-Dengue in the subjetcs of Divinópolis/MG within an epidemic

period of the disease, and correlate the results with the data from the Free Consent and

Enlightenment Term obtained from each patient. Thereby, the serological assays to detect antibodies

IgM and IgG anti-Dengue were performed by the usage of the Kit Immunochromatographic PanBio® in

316 blood samples obtained at Centro Municipal de Apoio à Saúde (CEMAS) of the Divinopolis, with

the signature of participants of the Consent Term, according to the UNIFAL Research and Ethics Committee (292.311/2013). The results showed a total of 36 positive samples to IgM, 24 to IgG, and

53 to IgM/IgG. From the Consent Term declared data and its comparison with

immunochromatographic assays, it was possible to relate the age with the serological frequency. In

primary infections (positive IgM), the average of patients age was 60 years-old. On the other hand,

secondary infections had the average of patients: 40 years-old (positive IgG), and 60 years-old

(positive IgM/IgG). Thus, the results from the analyzed samples showed that primary and secondary infections were more frequent in elderly patients. This finding is an important concern since secondary

infections may develop to the severe form (hemorrhagic) of the disease, mainly in vulnerable patients,

such as elderly. The serological frequency of DENV in Divinopolis/MG serves as an alert to Public

Health workers and may support the development of disease surveillance strategies and definition of

more effective ways to prevent epidemics.

Keywords: Dengue, IgM, IgG, immunoassay

Financial support: FAPEMIG, CNPq, UFSJ