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Usefulness of saliva samples for hepatitis B virus DNA (HBV DNA) detection

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Worldwide, hepatitis B virus is responsible for 240 million chronic cases of infection and diagnosis is made by detection of antigens, antibodies and genome in sera samples. But HBV DNA can be detected in other biological fluids of infected individuals in smaller concentrations, such as seminal fluid, urine, oral fluid and tears. Saliva samples have been studied as alternative sample for molecular diagnosis of HBV since collection is cheaper, less invasive and less painful when compared to blood collection. Some studies have shown that the HBV DNA can be detected or quantified in saliva samples using different protocols ("in house" or commercial quantitative ones) where varied values of sensibility and specificity are observed, however no protocol had yet been described or optimized for use in saliva samples. So, in order to evaluate the usefulness of saliva samples for HBV DNA detection, extraction and detection methods for HBV DNA detection were investigated. In this study from our group it was possible to detect HBV DNA 200 copies/mL in artificially contaminated saliva samples using "in house" molecular methods and according to the literature, we could realize the importance of saliva collector for the success of PCR, since samples obtained by spontaneous salivation and commercial collectors with mechanical friction principle generates more satisfactory results in molecular studies, so we are now evaluating the efficiency of four different collection devices of oral fluid samples, a non commercial one (spitting) and three commercial assays.

Biography

Moyra Machado Portilho is a Biomedic with Master degree in Tropical Medicine Program from Oswaldo Cruz Foundation (Fiocruz, Rio de Janeiro, Brazil) and currently is a PhD student of the same institutional program. She has expertise on molecular diagnosis of HBV infection, conducting studies to evaluate the effectiveness of alternative fluids, such as saliva samples, for HBV diagnosis.

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