cause of childhood infection during a longitudinal study conducted more than 30 years ago, demonstrating prolonged shedding; high prevalence in controls; possible resistance to infections; and relationship between breastfeeding and susceptibility to infections at community level, besides a broad genetic diversity likewise it can be currently be observed.  

BV203 - NATURAL HISTORY OF NOROVIRUS INFECTIONS IN CHILDREN FROM BELÉM, PARÁ: A COMMUNITY BASED LONGITUDINAL STUDY

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Norovirus (NoV) are the most important pathogen when considered outbreaks of AGE in human populations. The genotype GI.4 is the most prevalent worldwide and is responsible by the majority of the global epidemics (pandemics) of viral aetiology. The objective of this study was to detect and characterize the infections by NoV that occurred in children followed up in the community from birth until the three years old, residents in neighbourhoods of low socioeconomic status from Belém, between 1982 and 1986. Fecal specimens were obtained during a community based longitudinal study whose total of 2,013 samples were collected. It was tested a subset of 216 fecal samples belonging to three children residents in the districts of Barreiro (n=69), Marco (n=77) and Terra Firme (n=70) of which were collected feces fortnightly or when they have diarrhea. Samples were tested by quantitative PCR (qPCR) using the kit Superscript III OneStep RT PCR Systems with Platinum Taq (Invitrogen) for the detection of GI and GII genogroups. Positive samples by qPCR were submitted to Seminested RT PCR reaction using primers JV13I/JV12Y (first step) and JV13I/G1 or JV12Y/NoroIIR (second step) for GI and GII, respectively. The positive ones were sequenced aiming the partial characterization of region A of the viral polymerase gene. The phylogenetic construction was performed using the method of NeighborJoining Kimura 2 parameters, with bootstrap of 1000 replicates. The positivity of 14.3% (31/216) was observed, being 13% (28/216) for GI and 1.8% (4/216) for GII. One sample was positive for both GI and GII. It was possible to classify 60.7% (17/28) of GII and 100% (4/4) of GI, being observed the genotypes GII.P4 (58.8%), GII.P6 (11.8%), GII.Pa (5.8%), GII.Pnew (11.8%). For genogroup I it was observed the genotypes: GI.P5 (25%), GI.P7 (25%), GI.Pd (25%) and GLP1 (25%). The highest frequency of infection was detected in the age range of 6 to 12 months (p=0.0024) and it was not determined no seasonality for NoV in the period of study, showing peaks in November 1983, August 1984 and September 1985. These results demonstrated the diversity of NoV in children in the community circulating in the 1980s, causing mainly asymptomatic cases. In addition, it was observed that the GII.4 was the most prevalent genotype since that time. This study contributed to a better understanding of this pathogen in gastrointestinal infections.

BV222 - EVALUATION OF MYRCIARIA FLORIBUNDA IN VITRO ACTIVITY AGAINST ZIKA VIRUS

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Zika virus (ZIKV) had an increase in the number of cases reported in the past few years. Diseases like microcephaly and Guillain-Barre syndrome are commonly associated with the ZIKV infection. Due to its upsurge severity studies in the development of medicines to inhibit virus replication have become essential. In this sense, Myrciaria floribunda is a widely spread tree, especially in the north of Brazil, whose essential oil properties have been documented for antimicrobial, anti-inflammatory and antitumor activities. The stem and leaf of M. floribunda were extracted with dichloromethane, ethyl acetate and hexane. To evaluate the antiviral activity of the extracts, VERO cells, growing in 24 wells plates with 1 x 105 cells/well density, were infected with ZIKV (1 x 104 PFU) using 0,1 MOI for one hour at 37ºC in 5% CO2 atmosphere. Afterwards, the cells were treated with the extracts in two concentrations, 10 and 30µg/mL, in 5% FBS medium. The cells were lysed by three freezing and thawing cycles, the supernatant was titrated by plaque essay. The plaque remained in an incubator for five days, subsequently the supernatant was removed and crystal violet was added. The inhibition percentage of M. floribunda hexane, dichloromethane and acetate leaf extracts at 30µg/mL was above 85%. On the other