Noroviruses (NoVs) are an important cause of acute gastroenteritis in humans worldwide and are considered the second causative agent of viral gastroenteritis in children under five years old. The human infections are associated mainly to GII.4 genotype whose variants have been associated with global epidemics of acute gastroenteritis. The main objective of this study was to analyze stool samples from children with acute gastroenteritis collected between July and September 2012, obtained within the National Surveillance Program of Rotavirus Gastroenteritis, coordinated by Brazilian Ministry of Health. The detection of NoV was first performed using a commercial enzyme immunoassay (EIA). The viral genome was amplified by RT-PCR using primers specific for region D of the viral capsid of NoV GII (Cap C, Cap D1 and Cap D3) and primers for P2 region (EVP2F, EVP2R). DNA sequencing was performed using the Big Dye Terminator Cycle Sequencing Ready Reaction Kit. A total of 25 samples were collected of children with acute gastroenteritis from Rio Branco, Acre. Patient's ages ranged from 4 months to 8 years old. These samples were analyzed by EIA and 48% (12/25) were positive for NoVs, which occurred mainly in children between 6-12 months (42%-5/12). NoVs genotype characterization, detected the New Orleans 2009 and Sydney 2012 GII.4 variants. The sequence had a high nucleotide identity among them (range 98.8 - 99.5%) and differed 97.4 - 98.8% when compared with other NoVs strains, in analysis of the region P2. This study demonstrated the circulation of the two most recently identified GII.4 variants, New Orleans 2009 and Sydney 2012 in the city of Rio Branco, Acre and this represents the first detection of the recently emerged GII.4 Sydney 2012 variant, in Brazil. Additional studies are needed and continued surveillance will provide more information about emergence, circulation and antigenic diversification of the NoVs genotypes that predominate in this region.

HV158 - DETECTION OF ASTROVIRUS IN FECAL SAMPLES FROM CHILDREN UNDER FIVE YEARS OLD FROM RIO BRANCO, ACRE, BRAZIL
1. Seção de Virologia, Instituto Evandro Chagas, SAVIR/IEC, Rodovia BR-316, Km 7, S/N 67030000 Levilândia, Ananindeua-PA
2. Seção de Bacteriologia, Instituto Evandro Chagas, SABMI/IEC, Rodovia BR-316, Km 7, S/N 67030000 Levilândia, Ananindeua-PA

The human astroviruses (HAstVs) have been associated with outbreaks and sporadic cases of acute gastroenteritis involving young children and other age groups worldwide. The transmission of HAstVs occurs by the fecal-oral route, person to person contact or by ingesting contaminated water or food. Diarrhea and vomiting are the main symptoms caused by these agents. The HAstVs belong to the Astroviridae family, genus Mamastrovirus, being divided into eight “classic” genotypes (HAstV-1 – HAstV-8), and the recently described VA1, VA2, VA3, MLB1 and MLB2. The objective of this study was to detect HAstVs in fecal samples collected from children under five years old, and their correlation with epidemiological aspects. Four expeditions to the city of Rio Branco, Acre, were performed during the months of February, April, June and August of 2012, with duration of fifteen days each. Fecal collections were realized in two emergency units (UPA). The detection of HAstVs was done by reverse transcriptase-polymerase chain reaction (RT-PCR) using the primers pair Mon 269/Mon 270. HAstVs were detected in 13 (3.2%) of the 401 samples analyzed, being 2.9% (2/69) in June and 8.9% (11/123) in August. The HAstVs were detected in 5.1% (10/194) and 1.4% (3/207) of the samples, in both symptomatic and asymptomatic groups, respectively. The distribution of positive cases by age group demonstrated that the female children of 0-6 months old (12.1%-5/41) were the most affected group. The HAstVs has been considered as an important etiological agent of acute gastroenteritis in Brazil, as verified in Belém (13.1%-40/305). Rio de Janeiro (13.5%-318) and São Paulo (28.2%-66/234). The data obtained in this study demonstrate the circulation of HAstVs in Acre and are important to orient health actions, due to the inexistence of similar studies in that region.

HV160 - DETECTION OF NOROVIRUS IN FECAL SAMPLES FROM CHILDREN WITH AND WITHOUT ACUTE GASTROENTERITIS FROM RIO BRANCO, ACRE, IN THE YEAR OF 2012
1. Instituto Evandro Chagas, IEC, Rodovia BR-316, Km 7. Ananindeua, Pará
Norovirus (NoV) belongs to Caliciviridae family and are a common cause of non-bacterial diarrheic outbreaks, transmitted by the fecal-oral route, by contaminated water and food or by person to person contact. This study aimed to detect and analyse epidemiological aspects of NoV infection in fecal specimens collected from children under five years old, during four expeditions to Rio Branco, Acre. A total of 401 samples were collected in January, March, June and August of 2012. The specimens were collected from children attended at the Emergency Unit of the I and II District. The samples were tested by a commercial enzyme immunoassay (EIA) and reverse transcriptase-polymerase chain reaction (RT-PCR) using the primers Mon 432-434/ 431-433, that are specific for NoV genogroups GI and GII, respectively. A positivity of 12.7% (51/401) was observed for NoV for at least one method. The highest positivity 31.9% (22/69) was verified in June. Analysis of the positive cases by age group showed that males of 6-12 months old were the most affected with positivity of 25% (9/36) and as the second the females of 12-24 months old with 20% (9/45). The frequency of vomiting observed in diarrheic children, both positive and negative for NoV, was similar in almost all months of collection, with exception of J une, when the positivity of 76.4% (13/17) was observed in the NoV positive cases and 34.6% (9/26) in the negative ones. Studies have demonstrated the importance of NoV as etiological agent that required medical care. The positivity verified in this study (12.7%) was a little higher than 9.8% (30/305) detected in a surveillance carried out in hospitals and emergency departments in Belém. In Manaus the NoV were observed in 35.4% (171/483) of the samples from Emergency Units. The data obtained in this study are relevant considering the few information available about the NoV circulation in Rio Branco. These results may contribute to the improvement of Public Health of this state.

Dengue virus (DENV) (Flavivirus, Flaviviridae) occurs as four antigenically distinct but genetically related viruses named DENV-1 to -4. DENV is transmitted by species from Aedes genus (Culicidae), mainly A. aegypti. DENV-1 to DENV-4 circulate in Brazil and the country has the higher numbers of DENV in Latin America. Minas Gerais state usually present high number of dengue cases and until May 2013, 313,545 suspected cases and 88,881 confirmed cases were reported. The LIRAA (Aedes aegypti infestation index rapid survey) presented an increase of four times when the index from March/2012 (1.90%) was compared to the index from March/2013 (7.80%). An increase in suspected (3,877) and confirmed (2,981) dengue cases, in 2013, was also observed. The aim of this work was to perform a prospective study of A. aegypti infection with DENV in Juiz de Fora-MG. Larvae and mosquitoes were collected in epidemic and non-epidemic periods in 2012 and 2013 and properly identified. Pools of larvae (165 pools, each contained 50 larvae) and mosquito (53 pools, each contained 20 mosquitoes) were macerated and used for total RNA extraction. Total RNA was used for cDNA synthesis followed by nested-PCR to detect DENV. DENV was not detected in none of mosquitoes pools tested. DENV was detected in six pools of larvae (3.63%) obtained in Central, Northwest, East and South regions. These results reinforce the circulation of DENV in Juiz de Fora - MG and in different regions of the city that are highly inhabited. Moreover, as known for DENV, the vertical transovarian transmission of DENV was detected here and may be implicated in DENV maintenance in the Juiz de Fora urban environment. Financial support: FAPEMIG, CNPq, CAPES, UFJF, PROPEQ/UFJF.

HV176 - THREE-DIMENSIONAL MODELS OF NS3/4A PROTEASE CONTAINING RESISTANCE MUTATIONS TO PROTEASE INHIBITORS FROM PATIENTS WITH CHRONIC HEPATITIS C PROTEASE INHIBITORS NAÏVE.

Hoffmann, L., Da Silva, M.L., Ramos, J.A., Valentin, E.S., Ürményi, T.P., Rondinelli, E., Bisch, P.M., Silva, R.

1. Universidade Federal do Rio de Janeiro, Inst de Biofísica, UFRJ, IBCCF, Av. Carlos Chagas Filho, 373, CCS, bl G, sl G1050, Ilha do Fundão, RJ, 21941902
2. Instituto Nacional de Metrologia, Qualidade e Tecnologia, INMETRO, Av. Nossa Senhora das Graças, 50 - Xerém, Duque de Caxias, RJ, 25250020