Background:

Acute gastroenteritis is a leading cause of morbidity and mortality among children under five years old worldwide. Viruses are the most common responsible agent and norovirus is considered to be the second after rotavirus. There is no published data on the occurrence of this agent in Brazzaville. This study aimed to determine the prevalence of norovirus infection and to evaluate the risk factors in hospitalized children in Brazzaville.

Methods:

From June 2012 to June 2013, stool samples were collected from children under five years old of age hospitalized with acute gastroenteritis at Makelelele hospital. Rotavirus and Adenovirus infections were already characterized in this population. A total of 545 samples were tested for GI and GII norovirus infections using nested duplex reverse-transcription–polymerase chain reaction with specific primers. The positive samples will be sequenced and analyzed to determine the corresponding genotype.

Results:

The GI and GII norovirus infection was found in 148 samples (27, 14%) in this study. Males (28, 85%) were more infected than females (25%) but the difference was not significant. Norovirus infection was detected only in children under 24 months with a higher prevalence in the age group of 7-12 months (P value=0.048). The norovirus infection was detected throughout the year but it peaked during the dry season (August-September). Dual infection Rotavirus and Norovirus was detected in 65 cases (11, 9%), Rotavirus-Adenovirus in 8 cases (1, 5%), Norovirus-Adenovirus in 4 cases (0, 73%). Triple infection was detected in 3 cases (0, 55%).

Conclusion:

This study suggests that Norovirus infection is the second cause of gastroenteritis after Rotavirus in the study area. However, further surveillance investigations need to be pursued in other sentinel sites of the country.