Etiology of acute diarrhea in children attending the emergency service in Sergipe, Northeast-Brazil

Ricardo Queiroz Gurgel, Flávia Apolônio Nóbrega, Ana Paula C. do Amaral Vicente, Victor Santana Santos, Julianne C. Vasconcelos de Santana, Isabel Ribeiro Lopes, Íkaro Daniel de Carvalho Barreto, Luciane M. Storti de Melo.

Graduate Programs of Health Sciences and of Parasitic Biology. Federal University of Sergipe (UFS), Aracaju, SE, Brazil

Background

Diarrhea still represents 8% of deaths in children under 5 years of age worldwide (1). This study aims to verify the presence of three etiological agents (Rotavirus, Norovirus and *Cryptosporidium spp.*) associated with acute gastroenteritis in children aged 0 to 11 years old in the reference Emergency Hospital of Sergipe, in Sergipe State, Northeast-Brazil.

Methods

An observational cross-sectional study was conducted in 92 children with acute diarrhea from January to July in 2014.

Results

It was observed that 57 (62%) of the samples presented infection by one of the pathogens studied. The average age of the children affected by one of the three pathogens was 22.24 months (95% CI, 15.26 - 29.21), 64% of males and 36% of females. In addition, 3% (2) presented co-infection by Norovirus and *Cryptosporidium spp.*. Rotavirus and Norovirus were present in all months of the studied period, but *Cryptosporidium spp.* was only observed in two months (April and May) during the fall.

In relation to the vaccination against Rotavirus of those infected by one of the three pathogens, 66% (n = 38) received the two doses, 5% (n = 3) were not vaccinated and 29% (n = 17) could not inform.

Conclusions

The presence of the three pathogens was verified in a reference emergency pediatric center, with Norovirus currently being the most frequent agent (49%), followed by Rotavirus (10%) and *Cryptosporidium spp.* (4%).

Table 1. Frequency of the etiological agents Studied.

Intestinal pathogens	(n)	%
Norovírus	46	49
Rotavírus	9	10
Cryptosporidium spp.	4	4
Not identified	35	37
Total	94	100%

Picture 1: Monthly distribution of infections among 57 children.

(1) UNICEF/WHO 2017.Levels&Trends in ChildMortality.