

Session: P091 Clinical epidemiology of viral infections

Category: 8d. Nosocomial infection surveillance & epidemiology

25 April 2017, 12:30 - 13:30
P1918

Prevalence of norovirus infections and prolonged shedding in symptomatic and asymptomatic kidney transplant patients in a Belgian University Hospital

Pascale Huynen¹, Axel Mauroy², Laurent Weekers³, Catherine Bonvoisin³, Lydie Magnee⁴, Laura Bologne⁴, Raphael Boreux¹, Françoise Toussaint⁴, Cécile Meex^{*1}, Marie Pierre Hayette⁵, Julie Descy¹, Etienne Thiry², Patrick De Mol⁴, Pierrette Melin¹

¹*Chu of Liège; Clinical Microbiology*

²*Faculty of Veterinary Medicine; Veterinary Virology and Animal Viral Diseases*

³*University Hospital of Liège; Nephrology*

⁴*University Hospital of Liège; Clinical Microbiology*

⁵*Chu of Liège; National Reference Center for Mycoses, Medical Microbiology*

Background: Noroviruses (NoV) are a leading cause of gastroenteritis worldwide. Moreover, they are recognized as a potential agent responsible for prolonged gastrointestinal symptoms in immunosuppressed patients. We conducted a prospective study to determine the prevalence of NoV infection and the duration of NoV excretion in kidney transplant patients of the University Hospital of Liège, Belgium, in patients presenting or not gastrointestinal troubles. The second objective was to observe the putative impact of a reduction in immunosuppressive therapeutics on gastrointestinal symptoms and on NoV shedding.

Material/methods: A total of 117 kidney transplant patients were enrolled in this study from April 2010 to March 2014: 79 and 38 patients with or without gastro-intestinal disorders, respectively, at the first visit. Clinical and epidemiological data as well as fecal samples were collected. NoV molecular detection and viral load quantification were performed for all samples. All the patients detected positive

for NoV in their first fecal sample were proposed to send back new samples in the following months in the aim to follow the NoV excretion.

Results: NoV were detected in 19.9% of the 166 collected stool samples (18.99% and 10.53% from the 79 symptomatic and the 38 asymptomatic patients, respectively). Norovirus GII was the most prevalent genotype in both groups. A NoV excretion ranging from 9 days to 8 months was documented in individuals who received a NoV follow-up. Phylogenetic analysis in follow-up samples from one symptomatic and one asymptomatic patient presented prolonged NoV excretion identified a GII.4 and a GII.12 strain respectively. Molecular NoV characterization confirmed the presence of a single genotype within each patient during periods of prolonged shedding.

When reduction of immunosuppressive treatment was applied, a decrease in NoV viral loads was observed in both patient groups, as well as improvement of the symptoms in symptomatic patients.

Conclusions: Norovirus is a leading viral enteric pathogen identified in transplant patients presenting or not gastro-intestinal troubles. We highlighted a prolonged NoV excretion in kidney transplants patients with and without gastro-intestinal troubles, and a positive impact of a reduction in immunosuppressive treatment on the symptoms. Continued investigation will allow the understanding of the NoV impact in immunosuppressed patients.