

**Viral load and epidemiological profile of patients infected by the pandemic (H1N1) 2009 influenza A virus in Southern Brazil**

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Correlation between the virologic profile and the clinical features of patients infected by the (H1N1) 2009 influenza virus provides important information for epidemiological control and clinical management of future disease outbreaks. In Brazil, the highest incidence and mortality rates during the 2009 pandemics were registered in the state of Rio Grande do Sul (RS). This study correlates viral load with epidemiological data of nasopharyngeal aspirate samples collected from patients in RS from June to December 2009. A total of 3,110 samples were analyzed by qRT-PCR using the standard CDC H1N1 (2009) kit. Of these, 933 samples were positive for pandemic (H1N1) 2009; 172 were positive only for infA and considered seasonal influenza; 13 were considered undetermined; 1,992 samples were negative for influenza. Combined molecular and epidemiological data were available for 39 seasonal and 220 pandemic influenza samples. Viral load was calculated based on the  $2^{-\Delta\Delta CT}$  formula. The Mann-Whitney U or Fisher exact tests were used for group comparisons, with  $P \leq 0.05$  considered significant. Median viral load was higher in pandemic than in seasonal influenza samples; in the latter, viral load was associated with shivering, sore throat, myalgia, auralgia, conjunctivitis and runny nose; the highest incidence and viral loads were found in the 20-29 years age group. Immunodepressed patients did not display higher viral loads than non-immunodepressed ones. Regarding seasonal influenza samples, there were no association between viral load and symptoms. Further molecular analyses (gene sequencing, mutation and phylogenetic analyses) are being performed with the H1N1 (2009) virus samples.

**Biography**

Ana B. Gorini da Veiga has completed her Ph.D. at the age of 29 years from Federal University of Rio Grande do Sul, Brazil, with an internship at the NIH, USA. She is an associate professor at Federal University of Health Sciences of Porto Alegre, with research projects in Molecular Biology, Virology and Bioinformatics. She is a member of Center for Technological Innovation in Health. She has won the National Young Scientist Award in Brazil (2005), besides other awards with her Doctoral studies. More recently, she is migrating to the field of epidemiology, genomics and phylogenetics of human pathogenic viruses.