Evaluation of GeneKam Real Time PCR Kit for Detection of the Novel Influenza A (H1N1) Virus

Kyung-Ok Lee[1], Su-Jin Jeong[1], Hye-Soon Seong[1], Min-Young Park[1], and Kang-Hee Song[2]

Neodin Medical Institute, Seoul, Korea[1]
Ejen Science, Co., Seoul, Korea[2]

Background: Accurate and rapid diagnosis of novel influenza A (H1N1) infection through timely implementation of antiviral treatment and other public health based measures is critical for minimizing further spread. Recently, a real-time reverse transcriptase polymerase chain reaction (rtRT-PCR) technology has been used for confirmation of novel influenza (H1N1) virus infection. In the present study, GeneKam kit (GeneKam, Duisburg, Germany) was evaluated for its clinical usefulness.

Methods: RNA control material supplied by KCDC and 40 nasopharyngeal samples presenting influenza-like illness (ILI) and 20 negative samples were used for this study. This assay was determined by Roche LC480 real time PCR machine. Serial diluted RNA was used for the sensitivity test. Moreover seasonal influenza, H1 and H3, were analyzed for the specificity test. GeneKam kit was compared with two commercial kits, including Roche kit (Roche, Germany) and Bioneer kit (Bioneer, Korea).

Results: The data analyzed by GeneKam kit were correlated with other commercial kits, including Roche kit and Bioneer kit. Seasonal influenza, H1 and H3, were not detected by using GeneKam H1N1 detection kit. Its sensitivity was intermediate to high for clinical diagnosis.

Conclusion: Based on these results we believe that GeneKam real time PCR kit can perform an important role as a sentinel test to detect novel non-seasonal influenza A (H1N1) viruses in patients presenting influenza-like illness (ILI) and therefore act as an early warning system for the detection of future pandemic influenza threats.

Corresponding author: Kyung-Ok Lee. E-mail: kolee9782@neodin.com