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EDITORIAL

Was the Mass Vaccination Effective During the Influenza Pandemic 2009−2010 in Korea?

The influenza A/H1N1 pandemic in 2009−2010 had a huge impact on scientists and public health authorities in the public health sector of Korea before and after the event. Laboratory scientists traced the pathogenesis and chronological localization of influenza A/H1N1 [1], and also checked antiviral resistance in Korea [2]. Surveillance data on influenza-like illness (ILI) were utilized to estimate the number of influenza patients in Korea [3]. Mathematical modelers evaluated the parameters of the existing preparedness plans in Korea [4].

In this issue, two studies deal with the effectiveness of vaccination against the H1N1pdm09 virus. One study was conducted under a military setting to measure its effectiveness [5]. The H1N1pdm09 vaccine, which was administered in January 2010, had approximately 50% effectiveness against the H1N1pdm09 outbreak that occurred in December 2010. The magnitude of vaccination effectiveness was robust with no substantial difference, even when multivariate analysis and various ILI definitions were used.

The magnitude of vaccine effectiveness was lower in this study than the 70% effectiveness during the H1N1pdm09 season (2009−2010) in previous studies, but was similar to the effectiveness during the following season (2010−2011) in previous studies. Studies that evaluated the vaccination effectiveness 1 year after a vaccination program have indicated that the vaccination effectiveness was not persistent because there were no statistically significant results [6,7]. However, the current study showed that there was still a statistically significant vaccination effectiveness 1 year after the vaccination. This was immunologically consistent with the results of an existing antigenicity study in which the vaccination effectiveness was persistent 1 year after seasonal influenza vaccination, although the antibody titer decreased [8].

This study has shown a unique approach to evaluate the effectiveness of mass vaccination in Korea. This evaluation would provide a valuable insight for public health officials and scientists to prepare for the next possible pandemic in Korea.

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