

Avian flu suspected upcoming pandemic: prevention and management

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Introduction

Avian H5N1 flu is presenting in the clinical practice as Acute Respiratory Distress Syndrome with high case fatality of 54% and majority of affected humans aged between 5 to 23 years [1, 2]. Rapid rate of H5N1 spread along with notoriety of the virus for frequent genetic re-assortment threatened of possible new influenza pandemic since the last avian flu pandemic in 1968 [2]. In 2014, the World Health Organization (WHO) has reported a spike in number of avian flu H5N1 cases and a threat of H5N1 as well as of new H7N9 avian influenza pandemic has continued to arise [3, 4]. H5N1 influenza pandemic occurrence was suggested to depend on the viral strains acquiring additional mutations that facilitate efficient human-to-human transfer of infection; if easy human-to-human transmission may occur with a new strain of the virus, we are highly susceptible to a pandemic [5, 6]. Keeping in mind the emerging resistance to common antiviral agents used to treat H5N1 influenza virus and the limited supply of H5N1 vaccine, prevention remains our best protection [7]. The WHO developed a guideline with 10 control measures to reduce transmission of H5N1 avian influenza virus in markets in low-resource settings including recommendations for visual inspection, cleaning and poultry-holding practices, as well as infrastructural requirements for zoning and for water supply and utilities [8]. Early and rapid detection of suspected infected patients with communicable diseases along with appropriate infection control practice, education, national and global preparedness guidelines would help to prevent disease transmission to health care providers [9]. Health care facilities were advised to retrofit current air exchange systems to increase the number of potential negative pressure rooms; to increase neuraminidase inhibitor supplies to provide treatment for healthcare workers exposed in the course of their duties and to have a complete set of policies to address the special considerations for a prolonged surge [10].

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