



REVIEW ARTICLE

AVIAN INFLUENZA CURRENT SITUATION IN EGYPT

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Avian Influenza, or (bird flu), is a contagious disease of animals caused by viruses that normally infect birds and less commonly infect pigs. Avian influenza viruses have, on rare occasions, crossed the species barrier to infect humans. To date all outbreaks of avian influenza have been caused by viruses of H5 and H7 subtypes. The outbreaks of highly pathogenic avian influenza that began in South-East Asia in the mid-2003 are the largest and most severe on record.

At present, H5N1 remains largely a disease of birds. The virus does not easily cross from birds to infect humans: despite the infection of tens of millions of poultry over large geographical areas for more than six years, fewer than 385 human cases have been laboratory confirmed as for 19 June 2008 and about two thirds of the cases have been fatal.

In the past, new strains have generated pandemics causing high death rates and great social disruption. In the 20th century, the great influenza pandemic occurred in 1918 -1919 and caused an estimated 40-50 millions deaths worldwide. Although health care has improved in the past decades, WHO is predicting that today a pandemic could result in 2-7.4 million deaths

globally.⁽¹⁾

H5N1 virus was first detected in domestic poultry in February 2006 and more than 1400 outbreaks have been reported from 23 out of 27 governorates in Egypt. Over 40 million birds have been culled, the poultry industry has been badly damaged with estimated loss of 3-4 billion USD. Furthermore, 1.5 million individuals whose income depend on poultry have been adversely affected.

As of September 2008, Egypt has reported 50 cases of laboratory confirmed human infections with avian influenza (H5N1) virus out from more than 5000 suspect investigated, since its first detection of the case in March 2006 and the last in April 2008. Egypt is among the countries reporting the large number of cases following Indonesia and Vietnam but has the lowest case fatality proportion. Twenty two died out of the 50 (mortality rate 44%). All cases had close contact with ill or dead poultry. They were 26 adults (52%) and 24 (48%) children.⁽²⁾

The interesting Egyptian finding is the very mild pediatric mortality. So, this unique clinical algorithm and treatment policy were shared during the second WHO Consultation on Clinical

Aspects of Human Infection with Avian Influenza Virus in Turkey 2007.⁽³⁾

Mortality in adults (77%) was much higher than that in children (8%). Also, in adult females, mortality (86%) was much more than that in adult males (40%). This is mostly due to the intensive way of infection in females, i. e. females are responsible for taking care of back yard poultry and also in charge of slaughtering, defeathering and processing them for food consumption. All the dead cases presented late to the hospitals with severe extensive pneumonia and ARDS. All were mechanically ventilated except one, died at the door of the hospital. Most of the pediatric cases (67%), presented and started treatment early without pneumonia and all of them recovered. While, 6 cases presented with pneumonia, 2 of them had ARDS, mechanically ventilated and died while four had respiratory failure and were not ventilated and all of them recovered.

Twenty seven cases presented with pneumonia (54%), 21 adults and 6 children. Twenty two of them died (81%), i.e. all the dead avian flu cases in Egypt had pneumonia complicated with ARDS. Four cases (15%) had mild pleural effusion. Only in three cases, sputum and/or blood culture showed *Staph.aureus*. Two of them were children and all the three recovered. Five had leucopenia with thrombocytopenia and one of them had also renal failure and liver impairment.⁽⁴⁾

Beside tamiflu (oseltamiver), we used combination of third generation cephalosporin with either macrolide or quinolone. In severe adult cases we added amantadin while in severe pediatric cases we used monoclonal Ig G. Although avian flu mortality in Egypt (44%) is low compared with global one (63%), however what's achieved, still we have to do much more.

REFERENCES

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