Update on Avian Influenza

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Avian Flu virus change lowers vaccine effectiveness

A change in the avain flu virus strain H5N1 has diminished the effectiveness of the vaccine against the disease. Avian flu vaccines are produced according to the gene type Z found in the avian flu virus strain H5N1 in 2003 but another gene type G was detected in 2005 and these two genes are not similar. So vaccines are more effective against type Z and less effective against type G.

New antiviral drug – Peramivir

A new antiviral drug to treat both avian and human flu, developed by United States-based BioCryst Pharmaceuticals, will be tested across Asia this summer.

In animal trials, the drug boosted the survival rates of mice and ferrets infected with the H5N1 avian flu virus.

The development of peramivir may be an answer to experts who want to have several antivirals to choose from when fighting the different types of flu, especially since the viruses mutate quickly.

Mild avian flu in Britain this May has pandemic potential

Four human cases tested positive for H7N2, a mild strain of avian flu, in Wales this May from a small farm which reported the death of several chickens. This is a reminder that the next flu pandemic can be sparked by a virus other than the feared H5N1 strain.

Health officials are currently investigating 142 people who may also be infected, of whom 12 have symptoms of flu or conjunctivitis. Health officials are treating hospital staff and patients after a health care worker caught the virus and also a primary school where one of the pupils developed symptoms.

Low pathogenic viruses can quickly morph into highly pathogenic ones, sometimes within weeks. Too little is known about flu viruses to predict with any certainty which ones are most lethal for humans.

Unlike many other avian flu subtypes, which disappear off the radar after a short period, H5N1 has remained entrenched in the environment, and continues to spread to new areas.

Still, while no avian flu virus can be ruled out when it comes to igniting the next pandemic, some clues maay exist. Though H5N1 has several worrying characteristics, other flu subtypes are also in the running for the pandemic title. The last two flu pandemics were the result of a human flu virus recombining with low pathogenic avian viruses.

Antibodies from survivors may hold clue to bird flu remedy

An article published in May in The Public Library of Science Journal PLoS Medicine describes how antibodies from survivors of the Vietnamese H5N1 strain were used to prevent mice from developing the infection by neutralizing the virus. Human monoclonal antibodies were created and trained to recognize the H5N1 virus. The role of antibodies in the body is to recognize and initiate an attack against the offending antigen – in this case the avian virus – and destroy it. The study showed that this treatment could be administered up to 72 hours from the onset of symptoms for it to be effective.