Avian influenza

In May 1997 a 3-year-old boy in Hong Kong presented with fever, sore throat and cough. His illness worsened over the next 2 weeks, and he died of viral pneumonia. An influenza A virus was isolated from a tracheal aspirate, but it could not be typed with standard reagents. This set off a search to identify the new strain. By August, 3 laboratories had independently identified the virus as a strain of influenza new to humans, A(H5N1). Before his illness the child had been exposed to infected chickens. This, then, was the first documented case of human infection with avian influenza A(H5N1) virus. Until this case was confirmed, the virus had been thought to infect only fowl. Since then, the same strain has been confirmed in 17 other patients, ranging in age from 2 to 60 years, and 1 other person is suspected of being infected. As of Jan. 16, 1998, 6 people had died, but no new cases had been reported for 2 weeks.

It has been difficult to estimate the incidence of this new strain of influenza in Hong Kong. Influenza surveillance in that city is done mainly at hospitals. Thus, only the most severe cases are detected. Expansion of influenza surveillance in Hong Kong since December 1997 to include government outpatient clinics may have contributed to the increase in the number of cases found. Studies are now under way at clinics and other sites to obtain a more realistic estimate of incidence and to portray more accurately the clinical spectrum. This is especially important given that poultry in Hong Kong and in Guangdong Province, China, have been suspected of being infected with strain A(H5N1) since early 1997.

The discovery of a new strain of influenza is worrisome. It is believed that because humans have not previously encountered this strain, we will have little or no resistance to it. Several of the 9 patients initially infected had had contact with poultry in Hong Kong. At this stage, there has been no definite sign of person-to-person transmission. However, 3 patients were related to one another, 2 of them living in the same apartment; all 3 of these patients had also been exposed to poultry. The other patients lived in different parts of Hong Kong. If the virus could be spread efficiently by person-to-person contact, there would be a possibility of an influenza pandemic. However, such spread has not so far been demonstrated in Hong Kong. The potential for widespread transmission is therefore unknown at present, and there have been no reports of large-scale outbreaks of respiratory illness in Hong Kong.

No vaccine for this strain is available, and there are currently no plans to develop a vaccine commercially. Efforts are under way to identify a candidate vaccine strain should commercial production become necessary. Amantadine and rimantadine should inhibit viral reproduction. Isolates of influenza A(H5N1) in Hong Kong have been found to be sensitive to both agents.

No cases of avian influenza A(H5N1) have been reported in Canada in poultry or humans. At this time, human strains of influenza A(H3N2), A(H1N1) and B continue to be reported across the country. The currently available vaccine is protective against these strains. — JH

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References