THE EFFECTIVE PHYSICIAN

Seasonal Influenza Diagnosis and Treatment

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Background

Seasonal influenza is a common clinical problem that results in more 35,000 deaths and 200,000 hospitalizations annually in the United States. The Infectious Diseases Society of America recently published clinical guidelines on influenza diagnosis and management.

Conclusions

Most patients infected with seasonal influenza have either asymptomatic disease or uncomplicated febrile respiratory illness. However, severe disease leading to complications, hospitalization, and death is a risk in previously healthy persons, those with medical comorbidities, and those at both extremes of age.

Influenza vaccine is the best method of prevention of influenza, but it is not universally effective. Antiviral prophylaxis and/or treatment continue to have a significant role in influenza control.

Reverse transcriptase polymerase chain reaction (RT-PCR) is currently the most sensitive and specific test for influenza and is also useful as a confirmatory test when other screening tests (immunofluorescent antibody or direct fluorescent antibody testing or commercial point-of-care testing) for influenza is used. Viral culture is also useful as a confirmatory test. Serology is not routinely useful in direct patient care, although paired sera may be useful in research settings.

Nasopharyngeal aspirates and swabs are the preferred testing samples for most patients; however, lower respiratory samples obtained by bronchoalveolar lavage or tracheal aspirate may be useful in immunocompromised and mechanically ventilated patients.

Influenza antiviral resistance is a growing clinical problem; as such, treatment recommendations are likely to change with time.

Implementation

Influenza vaccination is recommended in all health care workers, persons aged 6 months and older who want to prevent influenza, and all nonallergic patients at increased risk for influenza complications (in accordance with annual recommendations from the Centers for Disease Control and Prevention/Advisory Committee on Immunization Practices).

A diagnosis of influenza should be considered in all patients with fever and acute respiratory signs and symptoms, or an exacerbation of chronic respiratory symptoms, occurring during influenza season. Influenza should be considered in patients who are hospitalized without fever but subsequently develop fever and respiratory illness during hospitalization. Finally, influenza should be considered in any patient with fever and acute respiratory illness who has had potential epidemiologic contact with an influenza outbreak.

Influenza testing is recommended in patients in whom the results will affect clinical decision making.

Positive screening tests outside of influenza season (or when disease activity in the community is low) and negative screening tests in times when disease activity is high may warrant confirmatory testing with RT-PCR or viral culture.

Antiviral treatment of influenza is recommended for ambulatory patients at increased risk of complications who have laboratory-confirmed (or strongly clinically suspected) influenza and are within 48 hours of the onset of illness, regardless of vaccination status.

Antiviral treatment is recommended for all patients hospitalized with influenza who are within 48 hours of the onset of illness.

Treatment with antivirals should be considered for lower-risk patients and those who have contact with persons at risk for complications who have influenza diagnosed within 48 hours of symptom onset.

There are fewer data to support treatment of patients with influenza diagnosed more than 48 hours after symptom onset.

When influenza viruses are circulating in the community, antiviral prophylaxis is recommended for unvaccinated patients at high risk of influenza and/or those who are in close contact with high-risk patients for the 2 weeks following vaccination to allow immune response to the vaccine to develop. The choice of a particular antiviral or antiviral combination should be made based on the particular strain causing disease in that patient or community.

Antiviral prophylaxis is recommended in the presence of an influenza outbreak for all institutional residents regardless of vaccination status. The prophylaxis should be continued for up to 14 days.

Antiviral chemoprophylaxis is recommended for all members of a household of a person with a high risk of influenza complications when a case of influenza occurs in one member of the household, regardless of vaccination status.

In the presence of an outbreak, antiviral chemoprophylaxis is recommended for institutional and health care employees and in high-risk patients in whom vaccine is contraindicated or not likely to be effective.

Recommendations for evaluation, vaccination, antivirals, and other issues regarding seasonal influenza may not apply to pandemic influenza. The most current recommendations for seasonal and pandemic influenza are available at www.cdc.gov/flu.

Reference

Harper S.A., et al. Seasonal influenza in adults and children—Diagnosis, treatment, chemoprophylaxis, and institutional outbreak management: Clinical practice guidelines of the Infectious Diseases Society of America. Clin. Infect. Dis. 2009;48:1003-32.

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Health Workers Top Priority for Vaccine

BY JONATHAN GARDNER

Health care workers should be the top priority to receive immunization with the pandemic influenza vaccine, and individual countries should take their nations' domestic needs into account when determining how to prioritize inoculating subgroups vulnerable to the virus, a top international health panel has decided.

The World Health Organization's Strategic Advisory Group of Experts on Immunization has said that vaccinating health care workers is necessary to maintaining a functioning health care system and preventing infection with the pandemic influenza A(H1N1) virus in people who have preexisting illnesses, Dr. Marie-Paule Kieny, director of the WHO's initiative for vaccine research, said in a press teleconference.

Countries are advised to prioritize the vaccination of such vulnerable groups as the chronically ill and children, depending on each country's domestic needs, Dr. Kieny said.

For example, countries whose first priority is reducing sickness and death may choose to focus on inoculating the elderly and chronically ill first, while those countries whose priority is reducing the spread of infection may decide to inoculate schoolchildren first, she said.

The panel also concluded that at this time there is no concern regarding the safety of the tested pandemic influenza vaccine, but there is still an "urgent need" to collect more safety data on subgroups, Dr. Kieny said.

New adjuvants are being used in some pandemic vaccines that have not been fully tested, so postmarketing surveillance must also be effective, according to the panel.

In addition, the panel said data on immunogenicity and postmarketing safety and surveillance studies need to be shared among the countries to allow for adjustments in immunization policy, Dr. Kieny said.

The panel also recommended that countries in the Northern Hemisphere should proceed with plans for seasonal influenza vaccination as if there were no pandemic, because production of the seasonal vaccine is almost complete, according to Dr. Kieny. ■

Stop Lab Testing Once Pandemic Flu Is Found

Countries with existing cases of pandemic virus influenza A(H1N1) should stop widespread laboratory testing and move to wider indicators of disease, a top World Health Organization official said.

Dr. Keiji Fukuda, the WHO's interim assistant director-general for health, security, and environment, said in a telephone press conference that eliminating laboratory testing would ease the burden on national health departments dealing with widespread outbreaks of the virus.

Tailored testing of influenza cases will assist epidemiologists in estimating the incidence of pandemic H1N1 cases in the community, Dr. Fukuda said. He said the WHO will recommend testing of unusually severe cases, unusual clusters, or unusual symptoms.

Countries without cases should continue with laboratory testing of suspected cases of the pandemic virus, he said.

Speaking on cases of oseltamivir-resistant pandemic virus H1N1, Dr. Fukuda said there is no evidence of widespread transmission of the mutated virus.

The three separate cases in Denmark, Japan, and Hong Kong appear to have the same spontaneous mutation but do not appear to have reassorted with seasonal influenza viruses, he said.

The WHO does not recommend any changes to clinical treatment protocols for oseltamivir-resistant cases, Dr. Fukuda said.

He added that the WHO and national epidemiological agencies continue to watch for more sustained transmission of the resistant virus.

—Jonathan Gardner