Clinical features of severe cases of pandemic influenza (16/10/2552)

Pandemic (H1N1) 2009 briefing note 13

16 OCTOBER 2009 | GENEVA -- To gather information about the clinical features and management of pandemic influenza, **WHO hosted a three-day meeting at the headquarters of the Pan American Health Organization in Washington, DC on 14–16 October.** Findings and experiences were presented by around 100 clinicians, scientists, and public health professionals from the Americas, Europe, Asia, Africa, the Middle East and Oceania.

The meeting confirmed that the overwhelming majority of persons worldwide infected with the new H1N1 virus continue to experience uncomplicated influenza-like illness, with full recovery within a week, even without medical treatment.

Need for intensive care

However, concern is now focused on the clinical course and management of small subsets of patients who rapidly develop very severe progressive pneumonia. In these patients, severe pneumonia is often associated with failure of other organs, or marked worsening of underlying asthma or chronic obstructive airway disease.

Treatment of these patients is difficult and demanding, strongly suggesting that emergency rooms and intensive care units will experience the heaviest burden of patient care during the pandemic.

Primary viral pneumonia is the most common finding in severe cases and a frequent cause of death. Secondary bacterial infections have been found in approximately 30% of fatal cases. Respiratory failure and refractory shock have been the most common causes of death.

Presentations during the meeting explored the pathology of severe disease in detail, with findings supported by work in experimental animals. These findings confirm the ability of the new H1N1 virus to directly cause severe pneumonia.

Clinical picture different from seasonal influenza

Participants who have managed such cases agreed that the clinical picture in severe cases is strikingly different from the disease pattern seen during epidemics of seasonal influenza. While people with certain underlying medical conditions, including pregnancy, are known to be at increased risk, many severe cases occur in previously healthy young people. In these patients, predisposing factors that increase the risk of severe illness are not presently understood, though research is under way.

In severe cases, patients generally begin to deteriorate around 3 to 5 days after symptom onset. Deterioration is rapid, with many patients progressing to respiratory failure within 24 hours, requiring immediate admission to an intensive care unit. Upon admission, most patients need immediate respiratory support with mechanical ventilation. However, some patients do not respond well to conventional ventilatory support, further complicating the treatment.

On the positive side, findings presented during the meeting add to a growing body of evidence that prompt treatment with the antiviral drugs, oseltamivir or zanamivir, reduces the severity of illness and improves the chances of survival. These findings strengthen previous WHO recommendations for early treatment with these drugs for patients who meet treatment criteria, even in the absence of a positive confirmatory test.

In addition to pneumonia directly caused by replication of the virus, evidence shows that pneumonia caused by co-infection with bacteria can also contribute to a severe, rapidly progressive illness. Bacteria frequently reported include Streptococcus pneumoniae and Staphylococcus aureus, including

methicillin-resistant strains in some cases. As these bacterial co-infections are more frequent than initially recognized, clinicians stressed the need to consider empiric antimicrobial therapy for community acquired pneumonia as an early treatment.

Groups at greatest risk

Participants agreed that the risk of severe or fatal illness is highest in three groups: pregnant women, especially during the third trimester of pregnancy, children younger than 2 years of age, and people with chronic lung disease, including asthma. Neurological disorders can increase the risk of severe disease in children.

Evidence presented during the meeting further shows that disadvantaged populations, such as minority groups and indigenous populations, are disproportionately affected by severe disease. Although the reasons for this heightened risk are not yet fully understood, theories being explored include the greater frequency of co-morbidities, such as diabetes and asthma, often seen in these groups, and lack of access to care.

Although the exact role of obesity is poorly understood at present, obesity and especially morbid obesity have been present in a large portion of severe and fatal cases. Obesity has not been recognized as a risk factor in either past pandemics or seasonal influenza.

WHO and its partners are providing technical guidance and practical support to help developing countries better detect and treat illness caused by the pandemic virus. Patient care advice that can be applied in resource-limited settings is being rapidly compiled.

Source:
http://www.who.int/csr/disease/swineflu/notes/h1n1_clinical_features_20091016/en/index.html