Severe Acute Respiratory Syndrome - Global Alert

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Severe Acute Respiratory Syndrome (SARS) was acknowledged as a new entity in mid-February 2003. A flu-like illnesses followed by atypical pneumonia and high case fatality rate have been its characteristics. The World Health Organization (WHO) was required to issue a Global alert and an emergency travel advisory (ETA) on 15th March 2003. Since then, more than 456 cases, with 17 deaths, have been reported from 13 countries on three continents. Latest release from Hong Kong press informs that four more have fallen to SARS. Active transmission is ongoing in China - Guangdong Province, Taiwan Province and Hong Kong as well as Singapore, Vietnam & Canada. In addition, a link is suspected with an earlier outbreak of an unidentified disease in mainland China with 305 cases and 5 deaths. Singapore ordered about 740 people who may have been exposed to a mysterious flu-like illness to stay home for 10 days in efforts to contain the disease. Thus there appears to be sufficient cause for concern. Even the Director General of WHO, Dr. Gro Harlem Brundtland, has stated that “This syndrome is now a world-wide health threat” and “the world needs to work together to find its cause, cure the sick, and stop its spread”.

The syndrome needs to be addressed to for multiple reasons. First, it is a new entity. Second, it is communicable disease with high case fatality and is manifest as a transcontinental epidemic. Next, it has proven a major occupational hazard for the Health Care Providers (HCPs). Last, it has a potential to tax hospital services beyond their capacity.

Days after the WHO alert mass media poured voluminous material on the ‘action’ and ‘helplessness’ related to SARS. Such level of publicity helps create mass awareness; yet has the undesirable component of generating panic. In fact, a German state health official has accused colleagues in the state of Hesse of triggering a public-health panic by mishandling the case of a Singapore man infected SARS. He felt that the authorities handled it as if it had been a case of Ebola or smallpox. It is difficult to judge such reactions. It is well known that caution tends to be excessive when we deal with unknown and potentially dangerous situation.

The good news of this week is that the causal agent could be a member of paramyxovirus family. The progress comes less than a week after the World Health Organization pulled together the talent from 11 laboratories around the world in an unprecedented collaboration to hunt down the disease. Dr. Klaus Stohr, a WHO virologist who is coordinating the global laboratory network has stated that we can be relatively sure that we have now found the causative agent.

No doubt, the case fatality rate of SARS is around 3.72 percent and appears high. But we may compare it with around 2 per cent case fatality rate with typhoid fever even in the best of the centres. Perhaps we are unaccustomed to community acquired pneumonias not being amenable to any therapy and that giving a sense of helplessness amongst the HCPs in the initial stages.

Its rapid spread is no doubt a major cause of worry. Thus far we do not know the secondary attack rate of SARS. It’s not unusual for unknown illnesses to spring up and infect unprepared populations. The 1918 flu epidemic killed 20 million people worldwide. The affected primary geographic region is the well-known cradle of new influenza viruses. And it is these countries that are a business and tourist attraction. If a new mutant of influenza virus emerges, we are almost certain that it will be here and will spread from here globally. Fortunately, it is not the influenza virus. The cases in Canada or Germany are essentially consequent to travel to endemic area. A WHO international team of experts in epidemiology, microbiology, virology, and respiratory diseases has been commissioned and reported in China. It should be able to judge the issue of potential of spread. Today, at least, it does not appear to be very bad.

Occupational hazard to the HCPs will remain an area of anxiety. It is for the local governments to issue appropriate instructions and training to teams that will deal with SARS. Precautions of barrier nursing are extremely important.

The metro cities in India are at high risk of importing and spreading SARS from South East Asia. The endemic areas today constitute affordable tourism to Indian middle class. Population density and public transport systems make them particularly vulnerable. Concerns over travel to affected areas may call for postponing unnecessary or elective travel to these areas, though WHO has not particularly advocated such restriction. There is no evidence to date to indicate that the disease is transmitted during air travel, or that travelling in an aeroplane with an infected person has resulted in illness to other passengers or crew.

There seems to be the final question of the hospital services being overwhelmed by the onslaught of the epidemic. Prediction on this count is not easy. There are three possibilities. First, the epidemic may die its natural death.
This may happen if the virus was accidentally transmitted to humans and had extremely favourable environmental conditions initially. Second possibility is the virus getting attenuated with serial passage among the humans. And lastly, it may join the group of viral fevers that crop up cyclically like the measles virus.

General practitioners and Physicians need to be particularly on the look out for a viral respiratory disease not resolving in 3 days. They must be on the look out for signs of pneumonia. The WHO has issued excellent guidelines for clinicians on the internet. www.who.int/en/ The CDC website furnishes FAQs and guidelines for all related issues www.cdc.gov/ncidod/sars.

It is inevitable that newer infectious diseases will emerge. Globalisation of infections antedates the globalisation of economy. Fast communications can bring in information as well as fear very fast. Yet the events have shown that there is international co-operation that can withstand the challenge of a new microbe.

**REFERENCES**


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**The WHO has provided the following Case Definitions for Hospital Based Surveillance:**

**Suspected Case**

A person presenting to a health care facility after 23 February 2003 with all of the following:

- sudden onset of high fever (over 38 degrees centigrade)
- myalgia
- one or more respiratory symptoms (cough, sore throat, shortness of breath, difficulty breathing)

AND one or more the following:

- History of travel to mainland China, the Hong Kong Special Administrative Region of China, or Hanoi within two week of symptom onset
- history of having cared for, having lived with, having had face-to-face contact with, or having had contact with respiratory secretions of, a probable case.

**Probable Case**

A suspect case with chest x-ray findings of pneumonia or Adult Respiratory Distress Syndrome.

Suspected or probable cases based on the WHO definition should be considered to have possible links to these outbreaks. They should be isolated and cared for using barrier nursing techniques. They should be investigated for viral and bacterial causes for their illness including the “atypical” organisms. Treatment should include antimicrobials active against both typical and atypical organisms. Local hospital laboratories should liase with local PHLS laboratories so as to ensure that a comprehensive range of investigations are carried out.