

SARS - SEVERE ACUTE RESPIRATORY SYNDROME

Week 12, 2003

On 12 March 2003, the World Health Organization issued a global alert in relation to cases of atypical pneumonia of unknown aetiology. The disease has been named SARS (severe acute respiratory syndrome). The first reports came from the province of Guangdong in China, and later cases were reported from Hanoi and Hong Kong.

Outbreak status report

During the period 1 February to 18 March 2003, WHO has received reports concerning 219 possible or probable cases of whom four have died. Most cases are from Hong Kong (123), Vietnam (57) and Singapore (23). There are also cases from Canada, Germany, Taiwan, Thailand, Slovenia and the UK, all of which can be traced back to the Asian destinations mentioned above. Added to these is the outbreak in the province of Guangdong in China, with 305 cases, of whom five have died. Possible cases from other countries are being investigated. Most cases are by far hospital staff or family members with close contact with patients. There are no reports of extensive spread of infection in the community. On this basis, it is presumed that transmission occurs by person-to-person infection via excreta or secretions.

Symptoms

The incubation period is thought to be 2-7 days. Patients typically have fever, sore throat, cough, breathing difficulty, muscle pains and/or headache. SARS may be accompanied by rash, muscle stiffness, loss of appetite, confusion and diarrhoea. The diagnosis is often atypical pneumonia or respiratory distress syndrome (RDS).

Cause of SARS

The most analysed case is a doctor who was admitted to hospital in Frankfurt on 15 March 2003 with atypical pneumonia. He had treated one of the earliest SARS patients in Singapore between 3 and 9 March. On 9 March, the doctor developed fever and muscle pains, but travelled to a meeting in New York anyway. He sought medical advice because of pneumonia, and was admitted in Frankfurt, during a stopover on his way back from New York to Singapore, when his condition deteriorated. Paramyxo-like virus has been isolated from this patient, and this has also been detected in specimens

from a patient admitted with SARS in Hong Kong. The aetiological role of these findings has not yet been established, but they support a hypothesis that SARS is caused by a variant of paramyxovirus. Paramyxovirus is a heterogenous group of viruses that includes measles, mumps, respiratory syncytial virus, parainfluenza, nipah and hendra viruses.

Notification

Cases that fulfil the definition of SARS should be reported immediately by telephone to SSI:

- during working hours to the Department of Epidemiology, tel. 3268 3038,
- outside of working hours to the microbiologist on call, tel. 2016 1993.

Cases should subsequently be notified in writing to the local Medical Office of Health and the Department of Epidemiology.

The following case definition from WHO is also used in Denmark:

Suspected cases

A person presenting after 1 February 2003 with history of :

- high fever ($>38^{\circ}\text{C}$) **and**
- one or more respiratory symptoms including cough, shortness of breath, difficulty breathing **and**
- one or more of the following:
 - close contact, within 10 days of onset of symptoms, with a person who has been diagnosed with SARS. Close contact means having cared for, having lived with, or having had direct contact with respiratory secretions and body fluids of a person with SARS.

- history of travel, within 10 days of onset of symptoms, to an area in which there are reported foci of transmission of SARS.

Probable/possible cases

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

or

- a suspect case with an unexplained respiratory illness resulting in death, with an autopsy examination demonstrating the pathology of Respiratory Distress Syndrome without an identifiable cause.

On-call doctors and GPs

In the event of information about relevant travel or history of contact and symptoms consistent with SARS, the patient should be admitted on the basis of an ordinary clinical assessment in surgical mask. It is important that the doctor wears mask and gloves on contact with the pa-

tient, and washes his/her hands thoroughly afterwards.

Visitation and transport

An agreement is made between the doctor on call at the medical ward/infectious diseases ward and the hygiene organisation as to where the patient can most appropriately be admitted. During transport, the patient should wear a surgical mask. Accompanying staff (e.g. ambulance staff) should follow the regulations for prevention of contact- and airborne infection below.

Guidelines: patient care and visits

The patient should be admitted to an isolation room with negative-pressure ventilation. If this is not possible, the patient should be cared for in a single room with his/her own bathroom. Standard regulations should be observed, including good hand hygiene and regulations against contact and airborne infection; gloves, apron, protective eyewear and mask. The mask should be of a type with filter against bacteria and viruses-consultation with the infectious diseases ward. An ordinary surgical mask may not be as effective. Disposable equipment should be used, where possible. When using reusable equipment, heat sterilisation according to customary guidelines is recommended. For surfaces and spills of secretions, excreta or blood, a broad-spectrum agent is recommended, e.g. chlorine compound.

Laboratory investigations

Other possible causes of disease should be excluded by investigation of patients suspected of having SARS.

Foreign travel

SARS has not led to restrictions on foreign travel, but the situation is being assessed on an ongoing basis. Local transport in South-East Asia may be obstructed due to local restrictions.

Links

Up-to-date information about SARS can be found on www.ssi.dk. This site also provides answers to a series of frequently asked questions. WHO's Web site, www.who.int, is updated daily with a status report for the outbreak.

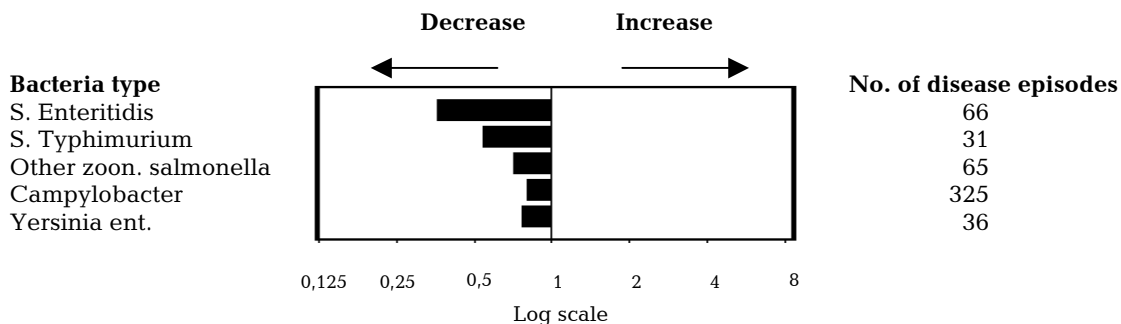
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19 March 2003

Patients with positive cultures of pathogenic intestinal bacteria, January - February 2003

County	S. Enteritidis		S. Typhimurium		Other zoon. salmonella		Campylobacter		Yersinia ent.	
	Jan	Feb	Jan	Feb	Jan	Feb	Jan	Feb	Jan	Feb
Copenhagen Munic.	1	7	-	2	3	5	19	22	4	-
Frederiksberg Munic.	1	-	-	-	1	-	3	3	1	-
Copenhagen	3	1	1	-	6	4	30	5	4	-
Frederiksborg	1	2	2	1	3	5	16	12	2	1
Roskilde	2	-	-	1	3	-	5	11	1	-
West Zealand	-	-	1	1	2	1	12	9	-	1
Storstrøm	1	-	3	1	3	1	4	10	3	1
Bornholm	-	-	-	-	-	-	1	-	1	-
Funen	3	5	2	4	2	3	12	16	1	-
South Jutland	2	7	-	-	1	-	9	2	1	-
Ribe	2	1	1	1	-	2	4	9	3	-
Vejle	-	3	1	-	4	1	16	16	1	-
Ringkøbing	3	6	1	1	1	-	5	4	2	-
Aarhus	4	4	1	2	6	2	13	17	2	2
Viborg	-	3	1	-	1	-	5	8	-	1
North Jutland	2	2	1	2	3	2	13	14	1	3
DK, Jan/Feb 2003	25	41	15	16	39	26	167	158	27	9
DK, Jan/Feb 2002	45	40	22	10	41	44	198	177	22	17

Barometer for pathogenic intestinal bacteria, January - February 2003

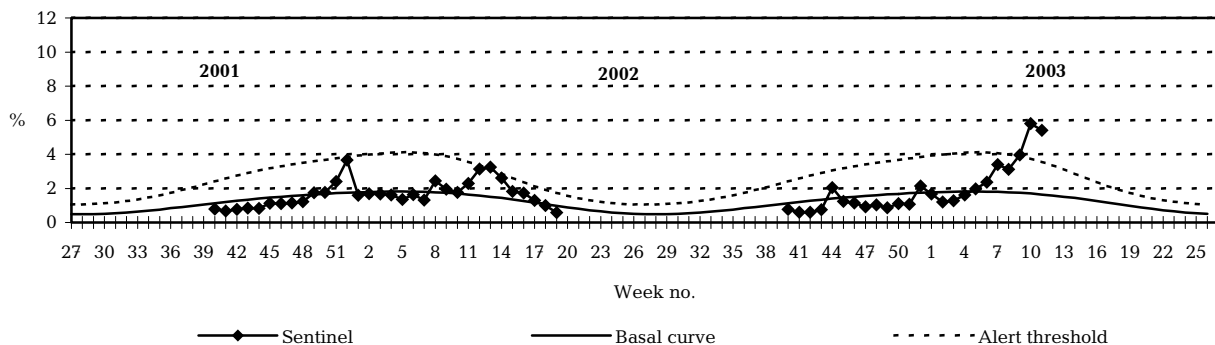


The barometer shows number of disease episodes in the two relevant months compared with the average of 15 two-month periods in the last five years. Further surveillance data may be obtained at www.germ.dk.

(Dept. of G-I Infections)

Sentinel surveillance of influenza activity

Weekly percentage of consultations, 2001/2002/2003



Sentinel: Influenza consultations as percentage of total consultations
Basal curve: Expected frequency of influenza consultations under non-epidemic conditions
Alert threshold: Possible incipient epidemic

(Dept. of Epidemiology)