

Severe Acute Respiratory Syndrome (SARS)

Caused by coronavirus SARS CoV. May have started in pigs or ducks in rural south China and mutated to affect humans. Do not confuse with avian flu, another zoonosis from the same area.

Epidemiology

- Probably originated in Guangdong Province, China Nov 2002.
- Between Mar-Jul 2003 >8,000 cases reported from around 30 countries (mostly China, Hong Kong, Singapore, and Taiwan. Canada had a significant outbreak around Toronto.)
- Since Apr 2005, appears contained.
- Appear to be transmitted by close contact (usually droplet) with infected patient.
- There is no difference in susceptibility to infection with regard to age, sex or race.

Risk Factors

- Visiting an infected or suspected area, including an airport, within 10d raises suspicion.
- Close contact (kissing, sharing eating utensils, conversation <1m apart, pat examination).
- Faeco-oral spread from diarrhoea may be possible.
- Healthcare workers and the families or carers of those who have been infected
- Incubation period usually 2-7d (possibly up to 10-14d).

Presentation

- 1st stage: flu-like prodrome - fever ≥ 38 , fatigue, headache, chills, myalgia, malaise, anorexia, and sometimes diarrhoea. This phase lasts 3 to 7 days.
- 2nd stage affects the lower respiratory tract - dry non-productive cough, SOB and possibly progressive hypoxia. Examination of the chest may be normal.

Investigations

Vitals: T, RR, SaO₂

Bloods: FBC (\uparrow N, \downarrow L, \uparrow pl \uparrow), UEC (mild \downarrow Na, \downarrow K, \downarrow Ca), ABG, LFT (\uparrow)

Imaging: CXR (pulm. infiltrates initially unilateral & peripheral, becoming patchy & bilateral)

Specimens for case definition: sputum, blood, urine, stool, pleural fluid, NPA (but beware risk)

Case Definition:

- Antibodies to SARS-CoV in specimens during the acute illness or >21 days after onset.
- Detection of SARS-CoV RNA by RT-PCR and confirmed with a second PCR assay.
- Culture of the virus.

Management

- Triage screen - travel history, fever, respiratory symptoms
- Mask patient & isolate (single room, neg pressure, hand washing, full PPE)
- As it is a viral infection, antibiotics are of no benefit unless secondary infection.
- Insufficient evidence to conclude if pulsed steroids or **Ribavirin** may help.
- **Interferon beta** seems promising and is recommended.

Prognosis

- 20-30% may need ventilation & ICU
- 5-10% case fatality

Prevention of Spread

- Notifiable disease
- Contact tracing