



Hong Kong scientists are warning of a deadly new strain of scarlet fever that has killed 2 children and infected dozens more in an outbreak across the city. Mainland China and the former Portuguese colony of Macau have also seen a surge in scarlet fever cases, which health officials say is linked to a mutation of the bacterium that causes the disease. Experts are warning that the scarlet fever outbreak may yet worsen.

Hong Kong, a densely populated city of 7 million people, is particularly nervous about infectious diseases. The SARS outbreak in 2003, which began in southern China, killed 300 people in the city.

On Tuesday [? Tue 21 Jun 2011, see news release [3] below], Hong Kong closed a kindergarten in the Sha Tin area for a week after initial tests showed that a 5 year old boy might have died from scarlet fever. A 7 year old girl has also died of scarlet fever in recent weeks, the 1st deaths in Hong Kong from the disease in a decade, Deutsche Presse-Agentur [DPA] reports.

University of Hong Kong scientists say they have discovered a mutation of the **Streptococcus pyogenes** bacterium that causes scarlet fever, making it more contagious and deadly, Hong Kong broadcaster RTHK reports. The new strain was resistant to some of the antibiotics traditionally used to tackle it, resulting in an unusually widespread and aggressive outbreak in Hong Kong, the scientists said.

Scarlet fever mainly affects children between the ages of 2 and 8. A record 419 cases have been reported so far in 2011 -- about 3 times as many as the total number last year [2010] in Hong Kong. There were 142 cases in the 1st half of June 2011.

"We notice that this is a regional phenomenon not limited to Hong Kong. We found an increased scarlet fever incidence is also found in mainland China, as well as Macau, so that points to something of a more diverse, geographical circulation," Thomas Tsang, controller of the Hong Kong Centre for Health Protection, told Channel News Asia.

Dr Tse Hung-hing of the Hong Kong Medical Association told DPA that doctors should use alternative antibiotics to tackle scarlet fever.

Scarlet fever is named after the strawberry rash it leaves on victims' tongues. Other symptoms include a fever, sore throat, and rash on the trunk, neck, and limbs. The illness is usually clinically mild but can be complicated by shock, heart, and kidney diseases. While scarlet fever was once a very serious childhood killer, it is now easily treatable and rarely fatal in developed countries.

A germ that causes centuries-old scarlet fever has mutated into a new strain more infectious and toxic for young children. So far one girl has died -- the 1st in 10 years -- and 2 boys have suffered complications.

The Department of Health yesterday [20 Jun 2011] issued an alert over the high level of cases, calling for vigilance against the disease, which is caused by group A *Streptococcus pyogenes* bacterium. Symptoms of the disease include fever, purple tongue, and body rashes.

University of Hong Kong assistant professor and medical microbiologist Samson Wong Sai-yin told The Standard: "It is the 1st time we have seen this kind of mutation in that particular type of Streptococcus." The "unique gene fragment" from a common bacterium in the mouth was inserted into the genome of the Streptococcus bacterium, with this mix contributing to an increase in transmissibility in this strain, Wong said.

A spokesman for the Centre of Health Protection last night said: "A simultaneous increase in scarlet fever cases is also noted in the mainland and in Macau, suggesting a regional phenomenon at play."

The alert was triggered when a 7 year old girl at St Stephen's College in Stanley died last month [May 2011]. 2 boys, aged 6 and 11, also developed complications. The younger boy, in whom the mutant germ was found, is still in intensive care at Queen Mary Hospital after developing septicemia, or blood poisoning. The 11 year old had a throat abscess and swollen face before recovering and being discharged from Prince of Wales Hospital.

Six "institutional outbreaks" have involved 22 children at 3 kindergartens, 2 primary schools, and one special child-care center this year [2011] -- most of the outbreaks in the past few weeks. More than 3 times the number of cases have been diagnosed this year -- 419 -- over last year's 128. But the health department is defending its decision not to suspend classes where there have been scarlet fever outbreaks, saying most cases were mild.

Centre for Health Protection controller Thomas Tsang Ho-fai said the mutation is one of the reasons why the disease is more widespread this year [2011]. "In the past, cases of scarlet fever would start to decline in August, but we expect the bacteria will continue to be active for several more months and throughout this summer," he said.

Scarlet fever is also resistant to the antibiotic erythromycin. Doctors have been advised to give penicillin or 1st-generation cephalosporin, said Hong Kong Medical Association council member Tse Hung-hing.

Delayed treatment has been singled out for the complications and the girl's death. Wong said: "She died very rapidly, one to 2 days after admission, because by the time she went to hospital she already had a very severe disease. It affected many organs including her kidneys, lungs, and heart." People are advised to maintain good personal hygiene, wash hands properly, and keep good ventilation.

The Centre for Health Protection is investigating the death of a 5 year old boy, believed to have been infected with scarlet fever. If confirmed, it will be the 2nd fatality involving the infection this year [2011].

The centre's controller Dr Thomas Tsang said classes at the boy's Sha Tin kindergarten have been suspended for a week. The boy came down with a fever on 15 Jun 2011 and was admitted to Prince of Wales Hospital on 19 Jun 2011 and moved to Princess Margaret Hospital, but his condition deteriorated and he died this morning [21 Jun 2011]. Test results are pending. He recently had chicken pox. His home and school contacts have no scarlet fever symptoms.

With more infections forecast for the summer, the centre will post daily updates on its website. Dr Tsang said 459 cases have been recorded so far this year [2011], and urged people to watch their personal hygiene.

Source:

Global Post [edited]

<<http://www.globalpost.com/dispatch/news/regions/asia-pacific/china/110620/hong-kong-scarlet-fever-outbreak-children-deaths>>

The Standard [edited]

<[http://www.thestandard.com.hk/news\\_detail.asp?pp\\_cat=30&art\\_id=112316&sid=32787317&con\\_type=3](http://www.thestandard.com.hk/news_detail.asp?pp_cat=30&art_id=112316&sid=32787317&con_type=3)>

Hong Kong Information Services, Health & Community News [edited]

<[http://www.news.gov.hk/en/categories/health/html/2011/06/20110621\\_142959.lin.shtml](http://www.news.gov.hk/en/categories/health/html/2011/06/20110621_142959.lin.shtml)>