

S'pore group ties up with Swiss firm to fight HFMD

■ BY LIAW WY-CIN

SCIENTISTS here are taking the lead in developing a treatment for hand, foot and mouth disease (HFMD), which afflicts more than 16,000 children in Singapore every year.

The Singapore Immunology Network (SigN) recently signed an agreement with Swiss biotech firm Cytos to speed up its search for potential drugs to battle HFMD.

There is still no treatment or vaccine for the disease, primarily because it is not as common in the West and major drug companies have not been interested in working on one.

In response, several groups are already working on various aspects of the disease, which is characterised by fever, headache, sore throat, ulcers on the mouth and tongue, and loss of appetite.

An HFMD quick diagnostic kit is being developed by the National University of Singapore's Yong Loo Lin School of Medicine and local biotech firm Rockyby. SingVax, a local vaccine developer, is currently in early human testing of a potential vaccine for the virus.

Scientists at SigN, under the national Agency for Science, Technology and Research, want to use the two-year deal with Cytos to help them pick out antibodies that target the enterovirus 71 (EV71), said the grouping's scientific director, Professor Paola Castagnoli.

"We hope to develop the promising antibodies into a drug in about two years, and after about five years of testing, to get it into the market," she said.

Cytos said its technology can identify potential human antibodies with a strong link to EV71 in fewer steps.

Although there are about 80 viruses that cause the disease, which affects mostly those below the age of five, the most deadly one is EV71.

EV71 causes 30 per cent to 40 per cent of HFMD cases in children here every year. For a few months spanning 2000 to 2001, it was responsible for an outbreak here that claimed the lives of seven children and made thousands more ill.

Dr Thoon Koh Cheng, a specialist in infectious diseases at KK Women's and Children's Hospital, said that although many things about the project, such as side effects, are still unclear, the development was a promising one.

National University Hospital specialist in children's illnesses, Dr Chew Su Yah, said one problem now is determining which patients will get more serious complications and which will not.

She said: "While the majority of patients recover fully, some will experience serious complications such as encephalitis (affecting the brain) and myocarditis (affecting the heart), especially during outbreaks.

"Hopefully, with treatment available, serious complications can be avoided and the duration of illness can be reduced."

Quick facts



Students being checked routinely for HFMD. ST PHOTO: DESMOND LIM

Cases for first 12 weeks of the year

2009: 4,274

2008: 3,721

Who gets it

Anyone, but children below the age of five are more susceptible due to their poorer understanding of hygiene.

What causes it

Up to 80 viruses, although the more common ones here are the Coxsackie virus and Enterovirus 71 (EV71).

EV71 is the most deadly virus, responsible for 30 per cent to 40 per cent of the cases in Singapore.

How it is spread

By direct contact with the nasal

discharge, saliva, faeces and fluids from the rash of an infected person.

Symptoms

Loss of appetite, fever, sore throat, ulcers in the throat, mouth and tongue, headache, and rashes on hands, feet and diaper area.

Symptoms usually last a week.

Treatment

None available.

Doctors usually prescribe medication to relieve the fever, aches and pain. It is usually considered a mild disease, but complications involving the heart and nervous system can lead to death.