

More than just a childhood disease

Kawasaki Disease is the most common cause of acquired heart disease in young children and can continue to pose health risk into adulthood.

When 15-month-old Christy suffered a high fever for six days, her doctor diagnosed a common cold and prescribed medicine to help treat her symptoms.

However, the fever persisted and she started to develop new symptoms including red eyes, red and swollen lips, a rash all over the body and then later swollen lymph nodes in her neck.

Blood tests revealed an elevation in inflammatory markers and an Echocardiogram (ECG) showed dilation in her coronary arteries. Christy was diagnosed with Kawasaki disease, a condition which mainly affects infants and children aged below five which causes inflammation of the medium-sized blood vessels.



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The first diagnosis

The disease is named after Professor Tomisaku Kawasaki who first identified the condition in 1967 in a group of Japanese children who were suffering fever, skin changes and swollen lymph nodes.

Although it was initially thought to be a rare condition mainly affecting Asian children, Kawasaki disease has become the leading cause of paediatric acquired heart disease in the developed countries.

It has surpassed acute rheumatic fever as the most common reason behind acquired heart disease in children in the United States. In Hong Kong, it affects around 40 out of every 100,000 children below five years.

An unknown enemy

More than 40 years after Kawasaki's first diagnosis, the exact causes of the disease are still unknown.

Like Christy's case, it is characterised by fever, bilateral non-exudative conjunctivitis (red eyes without discharge), red lips and oral mucosa, changes in extremities, skin rash, and swollen lymph nodes in the neck.

Some patients may develop damage to the arterial walls, heart leaflets or heart muscles and about 25 per cent develop coronary aneurysm – blood-filled swellings in the blood vessels. Left untreated, these symptoms can lead to a heart attack, sudden death, or ischaemic heart disease.

Treating Kawasaki

Treatment includes intravenous immunoglobulin (IVIG) and aspirin given in the acute phase to control inflammation of blood vessels and prevent further damage to the arterial walls.

The tricky part, however, is the diagnosis. As yet a single diagnostic test such as a blood test or X-ray, does not exist. Diagnosis is based on clinical grounds and paediatricians need to group all the clinical symptoms, blood parameters, and echocardiographic evidence to come up with a conclusion.

Christy was lucky. She was diagnosed quickly and over the following few days she was put on an intravenous drip and given oral medications. Her fever and other symptoms disappeared in three days and a subsequent series of echocardiogram showed her coronary arteries to be normal, although about two weeks later, her mother noticed the skin was peeling on her fingers.

Risk carried to adulthood

Although the majority of patients, like Christy, recover well from Kawasaki Disease, there is some concern that affected children may have a higher long-term cardiovascular risk when they enter adulthood.

Recent data has also showed that Kawasaki disease might be associated with premature atherosclerosis (hardening of the arteries) and early ischaemic heart disease. This is thought to be the result of residual damage to coronary arteries and heart muscles as a result of the on-going inflammatory process.

This is why the American Heart Association (1) recommends long-term risk assessment and counselling, especially for patients with transient or persistent involvement of the coronary arteries.

For further details, contact Hong Kong Adventist Hospital on 3651 8986.