

# A Case of Atypical Kawasaki Disease: Sudden Death of a 9-Year-Old Child with Ruptured Coronary Artery Aneurysm

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## Background

The deceased was a 9-year-old boy with no known chronic medical illness. He complained of fever, sore throat and neck pain since 2020-02-25 and attended a private hospital on 2020-02-25 and 2020-03-02. He was treated as tonsillitis and antibiotics were given. The fever was slightly improved but he then complained of skin rash, so he attended the private hospital again on 2020-03-04 and was treated as urticaria. He was found collapsed on sofa suddenly while watching TV at home on 2020-03-07, and was certified dead in Accident and Emergency Department of Ruttonjee Hospital on the same day.

## Autopsy

Coroner's autopsy was performed at Victoria Public Mortuary on 2020-03-10.

### External Examination

The eyes were a bit reddened (Fig. 1A) and the lips were cracked (Fig. 1B). Palms and soles showed no desquamation (Fig. 1C-D).



(Fig. 1A)



(Fig. 1B)



(Fig. 1C)



(Fig. 1D)

### Internal Examination

The anterior descending branch of left coronary artery showed two aneurysms (Fig. 2A), each about 1 cm in maximal dimension; one of the aneurysms was ruptured, causing haemopericardium with about 130 ml of blood clots in heart sac. Right coronary artery also showed an aneurysm (Fig. 2B), about 0.5 cm in maximal dimension.



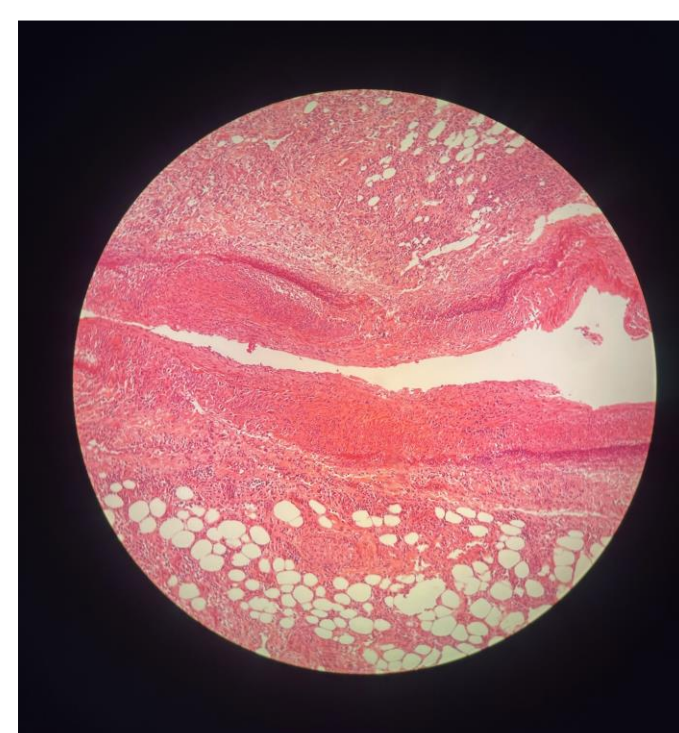
(Fig. 2A)



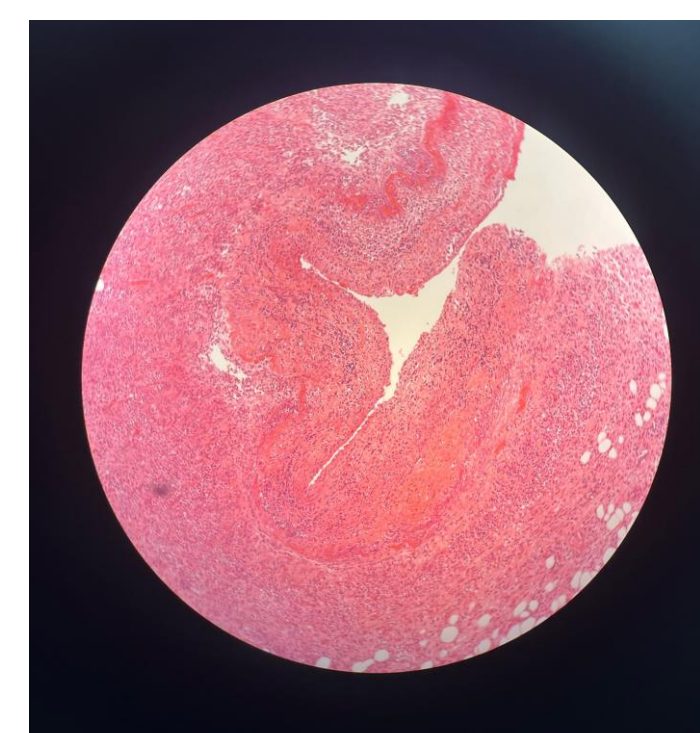
(Fig. 2B)

### Histological Examination

There were abundant inflammatory cells infiltrating all layers of the coronary arteries, causing extensive destruction to the arterial wall architecture (Fig. 3A-B).



(Fig. 3A)



(Fig. 3B)

### Microbiological Examination

Tissue specimens were taken for nucleic acid testing of virus including Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and all showed negative results.

### Toxicological Examination

Cetirizine, an antihistamine, was detected in the blood at its therapeutic level; no significant finding was obtained by a general screening procedure for alcohol, other common drugs and poisons.

## Cause of Death

In view of the available circumstances, autopsy findings and histological examination, the cause of death was given as 1(a) Cardiac temponade, 1(b) Ruptured coronary artery aneurysm and 1(c) Atypical Kawasaki disease.