

Hong Kong Children's Hospital announces a serious untoward event

The following is issued on behalf of the Hospital Authority:

The spokesperson for Hong Kong Children's Hospital (HKCH) announces a serious untoward event today (January 21):

A newborn baby with complex congenital heart disease (mitral atresia, hypoplastic left ventricle, double-outlet right ventricle, subaortic obstruction, and coarctation of aorta) developed heart failure and underwent an urgent cardiac surgery in HKCH on January 13 (three days after birth). It involved the "Norwood operation" for aorta reconstruction, atrial septectomy and placement of a shunt to connect the right ventricle and the pulmonary artery. Extracorporeal membrane oxygenation (ECMO) machine was also connected to support the patient's cardiopulmonary circulation. After the surgery, the patient was transferred to the Paediatric Intensive Care Unit for observation. Continuous renal replacement therapy was also given for her kidney problem.

As the patient was found to have hypokalaemia, intravenous potassium chloride infusion was prescribed on January 14 evening to increase the potassium level in the blood. The patient's potassium level remained low after two rounds of infusion, so a third dose was prescribed on January 15 morning. While being infused the third dose of potassium chloride, the patient developed bradycardia followed by asystole. Doctors immediately stopped the potassium chloride infusion. It was found that the patient's potassium level was higher than normal. Medications were given and the dialysate rate of the renal replacement therapy was increased to clear the excessive potassium. The patient's sinus rhythm returned and her heart rate picked up within five minutes. The potassium level also decreased gradually.

Since the patient was on ECMO which replaced her circulatory functions, her blood pressure and oxygenation were maintained during the event. Besides, relevant treatment was given immediately. As a result, no apparent adverse effect was caused.

The hospital has explained the event to the patient's parents. It will continue to closely monitor her condition to provide appropriate treatment, and maintain close communication with the family and provide necessary assistance.

The hospital is very concerned about the event, and has reported to the Hospital Authority Head Office (HAHO) via the Advance Incident Reporting System. A root cause analysis panel will be set up to investigate the reason for the patient's high potassium level. A report will be submitted to the HAHO in eight weeks.