

Suxamethonium chloride

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Heart arrest in an infant with Costello syndrome: case report

A 4-month-old male infant with Costello syndrome, who was scheduled for placement of a central venous catheter, developed heart arrest during anaesthesia induction with suxamethonium chloride.

The infant had a history of resting sinus bradycardia, seizures, gastro-oesophageal reflux, episodic refractory hypoglycaemia and three uneventful general anaesthetics. He was considered to have leprechaunism, and was receiving a continuous dextrose infusion through a gastrostomy tube. In the holding area, the dextrose infusion was converted to IV, his stomach was suctioned several times and he was pre-oxygenated. Pre-induction, he had a HR of 121 beats/min, a BP of 84/39mm Hg and an oxygen saturation of 100%. Anaesthesia was induced with IV propofol and suxamethonium chloride [succinylcholine chloride] 1.5 mg/kg, and he was intubated. Immediately after induction, he developed sinus bradycardia of 50 beats/min.

The infant received IV atropine, but rapidly developed heart arrest, and chest compression was commenced. Under IV epinephrine [adrenaline] administration, sinus rhythm was restored in less than 1 minute. Subsequently, he had a HR of 191 beats/min, a BP of 72/42mm Hg and an oxygen saturation of 100%. The surgery was concluded uneventfully.

Author comment: *"Although no conclusions can be readily drawn regarding the appropriateness or safety of using succinylcholine to facilitate tracheal intubation in patients with Costello syndrome, it seems to be the most probable cause."*

Shukry M, et al. Anesthetic considerations in the child with Costello syndrome: risks of cardiac arrest upon induction of anesthesia. *Pediatric Anesthesia* 18: 567-568, No. 6, Jun 2008 - USA 801111353