

[NM-142] The Silent Killer-A Case Report on the evaluation and treatment of a 2 month old male with idiopathic pulmonary hemorrhage

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A 2 month old 4kg FT male presented from home for a laparotomy for Ladd's procedure. His pmhx was significant for choking and cyanotic episodes with perioral cyanosis associated with feeds, for which he was admitted at two weeks of age. The patient subsequently underwent an upper GI which was suggestive for malrotation.

The patient was anesthetized by inhalation induction, and was difficult to ventilate. Upon dl, blood was seen in the oropharynx and a 3.0 cuffed ETT secured despite a grade 4 view. Upon chest auscultation the patient was found to have bilateral wheezing along with desaturation for which he was treated with albuterol. The patient stabilized at which point it was decided to proceed with surgery.

While returning the bowel into the abdomen the patient desaturated to 70% despite vigorous hand ventilation with elevated peak airway pressures. Breath sounds were clear bilaterally but blood tinged secretions were noted in the ETT. The heart rate progressively increased from 160-180 to 200-220 with ST segments elevations. Due to persistent desaturation and persistent EKG changes, it was thought the patient might be suffering from a pulmonary hypertensive crisis with right heart strain vs. pulmonary hemorrhage as a scant amount of blood was continuously noted in the ETT. Nitric oxide (NO) at 40 ppm was initiated, and despite a previously normal echocardiogram a repeat stat echo was performed which demonstrated normal structure and function. As he continued to be hemodynamically unstable, blood was transfused for a Hb 7.5g/dl and resuscitation was performed per PALS protocol. Once stable, the patient was transported to the NICU to be started on an oscillator. He was weaned off vasopressors overnight, off NO within 3 days and off the oscillator to conventional ventilator within a week with continuation of hydrocortisone q8hours. At the time of admission, patient and mom were living in a shelter with possible pesticide and gas leak.

Idiopathic pulmonary hemosiderosis is a rare diagnosis of exclusion. (1) Environmental factors such as water damage in home, pesticides, smoking/cocaine exposure can all contribute to a higher risk of IPH. (2).

The CDC released the definition for Acute IPH in 2004 stating: frank blood in the airway, age <1 year, absence of medical conditions related to pulmonary hemorrhage, and severe acute respiratory distress.(3) Our patient fits all of these categories including perihilar and bibasilar opacities on CXR post op several days after the incident. Despite full preoperative workup with labs, CXR and history obtained from guardian the silent, odorless environmental toxins can cause more harm than imaginable.

(1)Salem Al-Tamemi & Hussein Al-Kindi (2009) Acute Idiopathic Pulmonary Haemorrhage in a 2 month old Infant. Sultan Quaboos University Medical Journal; 9(2): 170–174

(2)Eduardo Montaña, MD, MPH & Ruth A. Etzel, MD, PhD (1997) Environmental Risk Factors Associated With Pediatric Idiopathic Pulmonary Hemorrhage and Hemosiderosis in a Cleveland Community. Pediatrics. Vol. 99 No. 1.

(3)Clive M. Brown, M.B.B.S. & Stephen C. Redd, M.D. Acute Idiopathic Pulmonary Hemorrhage Among Infants. 12 March 2004. Reference from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5302a1.htm>

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