

A FINE LINE – A CASE OF PULMONARY HYPERTENSION IN CRISIS

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Introduction: Acute pulmonary hypertension is a rapid rise in pulmonary vascular resistance that causes worsening right heart failure, systemic circulatory insufficiency and multiorgan failure. We reported a case of pulmonary hypertension in crisis.

Case description: A 35-year-old female presented with shortness of breath, recurrent vomiting, and diarrhea for one day, associated with failure symptoms for one month. She was tachypneic on a high flow mask (HFM) with 15L/min oxygen, hypotension and dehydrated. There was raised jugular venous pressure and bilateral pedal edema. However, the lungs were clear. Arterial blood gas on HFM showed severe high anion gap metabolic acidosis and type 1 respiratory failure. Point of care ultrasound showed dilated right ventricle (RV) and atrium, flattening of interventricular septum, poor RV function and estimated pulmonary arterial pressure was 57 to 62 mmHg. Left ventricular (LV) function was good. She was given a small fluid bolus of 400ml over 4 hours and started on noradrenaline and dobutamine infusion.

Discussion: Dilemma appeared in the case management regarding intubation and fluid resuscitation. There was presence of hop killers, hypotension, hypoxemia, and metabolic acidosis. Positive pressure ventilation will further increase pulmonary artery pressure and RV pressure. Fluid resuscitation should start low and go slow. Excessive intravascular volume

ultimately leads to increased cardiac septal bowing, worsening LV diastolic dysfunction and decreased cardiac output.

Conclusion: Acute pulmonary hypertension walks a fine line between pulmonary and systemic blood pressure. Judicious fluid volume resuscitation and avoid positive pressure ventilation if feasible.

Keywords: Pulmonary hypertension, right heart failure