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Case Report on Anaesthesia for Ruptured Ectopic with Severe Pulmonary Hypertension in a Mute Patient

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Abstract : Introduction: Severe pulmonary hypertension (PH) patients requiring non-cardiac surgery risk have increased mortality rates ranging. These patients are plagued with cardiorespiratory failure, dysrhythmias and anticoagulation potentially with concurrent sepsis and renal insufficiency, perioperative morbidity. We present a deaf-mute patient with severe idiopathic PH emergently prepared for ruptured ectopic laparotomy. Case Report: A 20 year-old female, 62kg (BMI 25 kg/m2) with severe idiopathic PH (2DE Ejection Fraction was 41%, Pulmonary Artery Systolic Pressure (PASP) 105 mmHg, Right ventricle strain and hypertrophy) and selective mutism was rushed in for emergency laparotomy after presenting to the emergency department for abdominal pain. The patient had an NYHA Class II with room air SpO2 93-95%. While awaiting lung transplant, the patient takes warfarin, Sildanefil, Macitentan and even Selexipag for rising PASP. At presentation, vital signs: BP 95/63, HR 119 SpO2 88% (room air). Despite decreasing haemoglobin 14 to 10g/dL, INR 2.59 was reversed with prothrombin concentrate, and Vitamin K. ECG revealed Right Bundle Branch Block with right ventricular strain and x-ray showed cardiomegaly, dilated Right Ventricle, Pulmonary Arteries, basal atelectasis. Arterial blood gas showed compensated metabolic acidosis pH 7.4 pCO2 32 pO2 53 HCO3 20 BE -4 SaO2 88%. The cardiothoracic surgeon concluded no role for Extracorporeal Membrane Oxygenation (ECMO). We inserted invasive arterial and central venous lines with blood transfusion via an 18G cannula before the patient underwent a midline laparotomy, haemostasis of ruptured ovarian cyst with 2.4L of clots under general anesthesia and FloTrac cardiac output monitoring. Rapid sequence induction was done with Midazolam/Propofol, remifentanil infusion, and rocuronium. The patient was maintained on Desflurane. Blood products and colloids were transfused for further 1.5L blood loss. Postoperatively, the patient was transferred to the intensive care unit and was extubated uneventfully 7hours later. The patient went home a week later. Discussion: Emergency hemostasis laparotomy in anticoagulated WHO Class I PH patient awaiting lung transplant with no ECMO backup poses tremendous stress on the deaf-mute patient and the anesthesiologist. Balancing hemodynamics avoiding hypotension while awaiting hemostasis in the presence of pulmonary arterial dilators and anticoagulation requires close titration of volatiles, which decreases RV contractility. We review the contraindicated anesthetic agents (ketamine, N2O), choice of vasopressors in hypotension to maintain Aortic-right ventricular pressure gradients and nitric oxide use perioperatively. Conclusion: Interdisciplinary communication with a deaf-mute moribund patient and anesthesia considerations pose many rare challenges worth sharing.

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