POCKET INTENSIVIST: RIGHT VENTRICULAR FAILURE MANAGEMENT

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OPTIMIZE VOLUME STATUS	• IV fluid administration can precipitate rapid clinical deterioration in patients with elevated RV afterload • Patients with RV failure due to chronically elevated pulmonary pressures often need diuresis on presentation • Patients with acutely depressed RV contractility and normal RV afterload (ie: RCA OMI) can give fluid boluses with frequent reassessments
AVOID HYPOTENSION	• Even transient hypotension can be problematic; low threshold to initiate early vasopressors and place A-line for close monitoring • Vasopressin and epinephrine are optimal first line agents, norepinephrine is also reasonable • Patients with significantly elevated pulmonary artery pressures may require higher MAP targets to optimize RV coronary perfusion pressures
DECREASE RV AFTERLOAD	• Correct hypoxemia (aggressive FiO2), hypercarbia (bronchodilators if COPD), and acidemia (correct hypoperfusion; bicarb usually not helpful) • Initiation of an inhaled pulmonary vasodilator via HFNC: Nitric oxide 20ppm vs Epoprostenol 0.05mcg/kg/min (brand names: Flolan, Veletri) • If no access to above, can use Venturi mask to deliver (off label) inhaled Milrinone 5mg (1mg/ml solution) vs Nitroglycerin 5mg (1mg/ml)
SUPPORT RV CONTRACTILITY	• Consider additional inotropic support, particularly if failing to respond to diuretic challenge or Lactate/HCO3/Base Excess not improving • Epinephrine reasonable first line, can also consider addition of milrinone versus dobutamine if systemic blood pressures have normalized
CAUTION WITH INTUBATION	• High risk of hemodynamic deterioration with intubation. If acute decompensation primarily due to RV failure should try to avoid intubation. • If intubation required for management of patient with comorbid pulmonary HTN and/or RV failure, requires careful hemodynamic management: Place A-line, HFNC (+/- inhaled pulmonary vasodilator), Epinephrine (gtt +/- push dose), Ketamine induction, Ambu-bag between attempts