

# 21 Pulmonary Embolism

Hypoxia, hypotension, tachycardia, atrial dysrhythmia, PEA, RV failure, ECG changes.

## START

### 1 Call for help and the code cart/defibrillator

- ▶ **State:** *“I think the patient may have a severe pulmonary embolism”*
- ▶ **Ask:** *“Who will be the crisis manager?”*

### 2 Action

- ▶ Titrate FiO<sub>2</sub> to maintain SpO<sub>2</sub> >92%
- ▶ If shock present, consider vasopressin
- ▶ If shock persists, consider milrinone (or other PDEIII inhibitor)
- ▶ If patient safe to transfer, consider CT Pulmonary Angiography for diagnosis
- ▶ If patient unsafe to transfer, then perform echocardiography (on call cardiac anesthesiologist)
- ▶ Discuss appropriate management with team:
  - Anticoagulation?
  - Thrombolysis? Thrombectomy (surgical or IR)
  - Supportive care?
- ▶ Consult SCU Pulmonology (Amion)

### 3 Consider...

- ▶ Avoiding dopamine and epinephrine and norepinephrine if possible (pulmonary vasoconstriction and afterload increases)
- ▶ Avoiding IV fluid boluses (failing RV)
- ▶ Inhaled nitric oxide, pulmonary vasodilator, (call Resp. Therapy)
- ▶ ECMO or RVAD if all else failing

## DRUG DOSES

Vasopressin:	0.01-0.1 units/min
Milrinone:	Load 50mcg/kg over 10min Infuse 0.375-0.75mcg/kg/min
Heparin for anticoagulation:	Load 80units/kg Infuse 18units/kg/hr
tPA for thrombolysis:	0.6mg/kg over 15min (max 50mg), OR 100mg over 2 hours

## REMEMBER

- 1) Positive pressure ventilation will decrease RV preload and increase RV afterload. Both of which may worsen RV failure.
- 2) CT pulmonary angiography is diagnostic standard, but patient may be unstable to transfer
- 3) Revisit diagnosis if patient not responding to treatment as expected

## Critical CHANGES

If PEA develops, Go to ▷ CHKLST 4