



Pulmonary Edema

Assessment

Pediatric Pearls:

- Use pediatric dosing of medications or electrical therapy for a pediatric patient < 37 kg and as defined by the PEDIA Tape.
- Pediatric hypotension is defined as SBP < 70 + (age in years x 2) mmHg

Signs & Symptoms:

- Bilateral rales
- Jugular vein distention
- Pinky, frothy sputum
- Peripheral edema
- Diaphoresis
- Hypoperfusion
- Hypotension
- Chest pain
- Respiratory distress
- Apprehension
- Orthopnea

Differential:

- Myocardial infarction
- Congestive heart failure
- Pulmonary embolus
- Pericardial tamponade
- Pleural effusion
- Pneumonia
- Asthma
- Anaphylaxis
- Aspiration
- COPD
- Toxic exposure

Clinical Management Options

P	P	P	P	P	P	<ul style="list-style-type: none"> • Oxygen • Position of comfort • BLS airway management • Aspirin if suspected ACS Chest Pain
L	L	L	L	L	L	<ul style="list-style-type: none"> • Consider CPAP with PEEP with rales/rhonchi indicating wet lung sounds • Nitroglycerin q 5 minutes if SBP \geq 100mmHg • Nitroglycerin topical paste to chest wall if SBP \geq 100mmHg • 4 lead and 12 lead ECG placement and acquisition • Place EtCO₂
1	2	3	4	5	6	<ul style="list-style-type: none"> • Vascular access
						<ul style="list-style-type: none"> • Monitoring and interpretation of ECG, waveform EtCO₂
						<ul style="list-style-type: none"> • Norepinephrine (Levophed) infusion, titrated to MAP \geq 65
						<ul style="list-style-type: none"> • Rapid sequence induction as needed to secure patent airway for oxygenation and ventilation.

Consult Online Medical Control As Needed

Pearls:

- Refer to drug formulary charts for all medication dosing for both adults and pediatric patients.
- Avoid Nitroglycerin in any patient who has used Viagra or Levitra in the past 24 hours or Cialis in the past 48 hours or other PDE erectile dysfunction medications due to potential severe hypotension.
- Careful monitoring of level of consciousness, BP, and respiratory status with above interventions is essential.
- Consider myocardial infarction in all these patients. If suspected give aspirin.
- Allow the patient to be in their position of comfort to maximize their breathing effort.
- Connect CPAP to o2 source and select liter flow setting to generate appropriate PEEP for patient condition per guideline.
- Patient BP may drop with CPAP, if CPAP is necessary for oxygenation/ventilation, may move to add pressor.