REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT - Basic

SMO: Cardiogenic Shock

Overview: Cardiogenic shock is the most extreme form of pump failure. It occurs when left ventricular function is so compromised that the heart cannot meet the metabolic needs of the body. Even with aggressive therapy, cardiogenic shock has a high mortality rate.

INFORMATION NEEDED
__ Presence of chest pain
__ Presence of crackles

OBJECTIVE FINDINGS
__ Profound hypotension (systolic blood pressure usually less than 80 mm Hg)
__ Pulmonary congestion (crackles)
__ Hypoxemia
__ Acidosis
__ Altered level of consciousness
__ Sinus tachycardia or other dysrhythmias
__ Cool, clammy, cyanotic or ashen skin
__ Tachypnea

TREATMENT

__ RMC

__ Oxygen at 100% by non-rebreather mask or assist with BVM.

__ Notify Medical Control EARLY of patient's signs and symptoms.
__ Closely monitor lung sounds for crackles.
__ Rapid transport – ILS/ ALS intercept if possible.

NOTE: A patient with chest pain and/or BP < 90 systolic should be treated under this protocol.

Documentation of adherence to protocol:

__ Oxygen administration
__ Signs and symptoms

PRECAUTIONS AND COMMENTS

- A patient with chest pain and/ or BP < 90 should be treated under cardiogenic shock protocol.

REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Intermediate

SMO: Cardiogenic Shock

Overview: Cardiogenic shock is the most extreme form of pump failure. It occurs when left ventricular function is so compromised that the heart cannot meet the metabolic needs of the body. Even with aggressive therapy, cardiogenic shock has a high mortality rate.

INFORMATION NEEDED
__ Presence of chest pain
__ Presence of crackles

OBJECTIVE FINDINGS
__ Profound hypotension (systolic blood pressure usually less than 90 mm Hg)
__ Pulmonary congestion (crackles)
__ Hypoxemia
__ Acidosis
__ Altered level of consciousness
__ Sinus tachycardia or other dysrhythmias
__ Cool, clammy, cyanotic or ashen skin
__ Tachypnea

TREATMENT

__ RMC

__ Oxygen at 100% by non-rebreather mask or assist with BVM.

__ Cardiac monitor

__ IV of NS
__ Treat underlying dysrhythmias per appropriate SOP.
__ Fluid challenge in 250ml increments may be considered in patients with clear lungs. Closely monitor lung sounds for crackles. Reassess lung sounds. May repeat 250 ml bolus X1 if lung sound clear and Systolic Blood Pressure remains less than 90 mm Hg.
__ Rapid transport – Consider ALS intercept.

NOTE: A patient with chest pain and/or BP < 90 systolic should be treated under this protocol.

Documentation of adherence to protocol:

__ Oxygen administration
__ Signs and symptoms
__ Cardiac rhythm and associated treatment/ management

PRECAUTIONS AND COMMENTS

- A patient with chest pain and/or BP < 90 systolic should be treated under this protocol.

REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Paramedic

SMO: Cardiogenic Shock

Overview: Cardiogenic shock is the most extreme form of pump failure. It occurs when left ventricular function is so compromised that the heart cannot meet the metabolic needs of the body. Even with aggressive therapy, cardiogenic shock has a mortality rate of 70% or higher.

INFORMATION NEEDED
__ Presence of chest pain
__ Presence of crackles

OBJECTIVE FINDINGS
__ Profound hypotension (systolic blood pressure usually less than 80 mm Hg)
__ Pulmonary congestion (crackles)
__ Hypoxemia
__ Acidosis
__ Altered level of consciousness
__ Sinus tachycardia or other dysrhythmias
__ Cool, clammy, cyanotic or ashen skin
__ Tachypnea

TREATMENT

__ RMC

__ Oxygen at 100% by non-rebreather mask or assist with BVM.

__ Cardiac monitor

__ IV of NS
__ Treat underlying dysrhythmias per appropriate SOP.
__ Fluid challenge in 250ml increments may be considered in patients with clear lungs. Closely monitor lung sounds for crackles. May repeat fluid bolus of 250 ml X1 if lung sounds remain clear and Systolic Blood Pressure < 90.
__ Determine body weight. Start **DOPAMINE DRIP (400 mg/250ml)** at 10mcg/kg/min (see dosage chart). Titrate to maintain BP at 90 systolic by 5mcg to maximum of 20 mcg/ kg/ min. Always titrate to response (systolic BP of 90), individual dosage requirements may vary widely. **DO NOT RUN DOPAMINE WIDE OPEN.**
__ Rapid transport .

NOTE: A patient with chest pain and/or BP < 90 systolic should be treated under this protocol.

BODY WEIGHT		Starting Rate (10 mcg/kg/min) in mcgtts / min	Do not exceed rate (20 mcg/kg/min) in mcgtts /min
Pounds	Kilograms		
80	36	12	27
100	45	16	34
120	55	20	41
140	64	24	48
160	73	28	55
180	82	32	61
200	91	36	68
220	100	40	75
240	109	44	82
260	118	48	88

Documentation of adherence to protocol:

__ Oxygen administration
__ Signs and symptoms
__ Cardiac rhythm and associated treatment/ management
__ Administration of Dopamine

PRECAUTIONS AND COMMENTS

- A patient with chest pain and/or BP < 90 systolic should be treated under this Protocol.