Cardiac Arrest in the Emergency Department

- medications
- ultrasonographer & team leader
- defibrillator
- airway
- vascular access
- compressor 1
- compressor 2
- family support
- change compressor every 2 min

**patient is unresponsive and apneic/gasping**

- resuscitation consistent with goals of care
- activate arrest team / get defibrillator

**rate >100/min**
- depth at least 2 inches or 1/3 APD
- allow complete recoil
- minimize interruptions

**establish vascular access**
- peripheral IV
- if unsuccessful, IO

**ultrasound: subxiphoid**
- r/o pericardial effusion
- if sonographic contractions, pulse check

**consider reversible causes of cardiac arrest**

**rhythm check**
- chest compressions 2 minutes
- assess rhythm as soon as defibrillator is available and every 2 min thereafter

**if VT/VF:**
- defibrillate
- continue CPR while defibrillator is charging
- 200 J biphasic, 360 J monophasic
- resume chest compressions immediately

**establish supraglottic airway**
- 8 breaths per minute
- be mindful of tendency to overventilate

**establish continuous capnography**
- if end-tidal CO2 is < 10
- improve quality of chest compressions

**epinephrine 1 mg**

**crystalloid bolus**
- if suspected hypovolemia
ultrasound: subxiphoid
rhythms
chest compressions 2 minutes
amineadone 300 mg
if refractory VT/VF

ultrasound: IVC, lung
r/o hypovolemia, tension pneumothorax

ultrasound: subxiphoid
rhythms
chest compressions 2 minutes
epinephrine 1 mg
if diastolic BP is less than 20 mmHg
if no arterial line, may empirically repeat epinephrine q3-5 min

ultrasound: aorta, FAST
r/o AAA, free abdominal fluid

ultrasound: lower extremities
r/o DVT

ultrasound: subxiphoid
rhythms
chest compressions 2 minutes
epinephrine 1 mg
if diastolic BP < 20

cardiac standstill
end-tidal CO2 < 10
terminate resuscitation

ROSC

No ROSC

post arrest care

fluids and vasopressors to MAP >65
 tidal volume 7 ml/kg, oxygenation to SpO2 94%, ventilation to PaCO2 40 mm Hg
if not following commands: cool to 32°C, starting with 30 cc/kg cold NS
if suspicious for AMI: coronary artery reperfusion, dobutamine if poor EF
consider CT brain to r/o intracranial cause of arrest and EEG to r/o seizures
monitor lactate, K, urine output; target serum glucose 144-180 mg/dL.

packed pRBCs
if suspected exsanguination
calcium chloride
if suspected hyperkalemia
dextrose
if suspected hypoglycemia

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