San Mateo County Emergency Medical Services

Refractory V-Fib/Pulseless V-Tach
Mills Peninsula Pilot Program

History
- Events leading to arrest
- Estimated downtime
- Prior resuscitation attempts
- Past medical history
- Medications
- Known terminal illness

Signs and Symptoms
- Pulseless
- Apneic

Differential
- Medical vs. trauma
- VF vs. pulseless VT
- Asystole
- PEA
- Primary cardiac event vs. respiratory arrest or drug overdose

Enter from Cardiac Arrest

V-Fib or pulseless V-Tach

Defibrillation 200J
- Resume high quality chest compressions
- Change compressors every 2 minutes
  (Limit changes/pulses checks < 5 seconds)

Establish IV/IO

Defibrillation 300J
- Resume high quality chest compressions
- Change compressors every 2 minutes
  (Limit changes/pulses checks < 5 seconds)
- Epinephrine (1:10,000)

Defibrillation 360J
- Resume high quality chest compressions
- Change compressors every 2 minutes
  (Limit changes/pulses checks < 5 seconds)
- Lidocaine

Consider Criteria for EMS Transport for Emergent ECMO:
- 18 – 75 years of age
- Body morphology able to accommodate automatic CPR device.
- Mills-Pen as receiving facility

After Second Shock:
- Notify on-call Shock Physician
  (650) 988-5500
- Mechanical CPR device applied
- Continue ACLS (limit 3 mg Epi), defibrillation PRN in route

INFORMATION FOR ON-CALL SHOCK CONTACT
Witnessed or unwitnessed?
Bystander CPR or no bystander CPR?
Downtime?
Age?
ROSC at any time?
Trauma?
Co-morbidities?
Body size (ok for LUCAS device?)

Persistent V. fib/V-tach AND phone call made
If in Mills-Peninsula catchment area, begin transport to Mills Peninsula Hospital
(Go to Pg. 2)

Return of spontaneous circulation?
No

Cardiac Arrest
Yes

Return of spontaneous circulation?
Yes

Go to Post Resuscitation TP

AT ANY TIME
Return of spontaneous circulation

No

Effective November 2018
Treatment Protocol CA03T
Effective April 2020
Refractory V-Fib/Pulseless V-Tach
Mills Peninsula Pilot Program

Mills Peninsula Hospital
(From Pg. 1)

On-Call Shock Doc
- Receives call from field crew to activate SHOCK Team: Interventional Cardiologist, Cath Lab Team, IR Tech, Echo Tech, Perfusionist, Operator
- Operator Notifies: House Supervisor, Admitting for pre-registration

Patient arrival

Patient boards in ED

Cath Lab ready?

Yes

Direct to Cardiac Cath Lab
- Arterial and venous access under US
- Measure ABG and serum lactate

Cath Lab Initial Assessment:
Determine CCL resuscitation discontinuation criteria:
- $ET CO_2 < 10 \text{ mmHg}$
- $PA O_2 < 50 \text{ mmHg}$
- Serum Lactate $> 18 \text{ mmol/L}$

*If $\geq 1$ criteria met and NO ROSC – declare patient dead

ROSC present?

No

- 21F Venous + 16F arterial cannulas in opposite groins
- Initiate ECMO

Yes

- Immediate coronary angiogram
- Hemodynamic support as needed

Mills Peninsula Hospital
(From Pg. 1)