

HEALTHEAST MEDICAL TRANSPORTATION  
MEDICAL OPERATIONS MANUAL

**2C VENTRICULAR FIBRILLATION/PULSELESS V-TACH**

**PATIENT CARE GOALS**

- Restore and maintain a perfusing rhythm in the context of cardiac arrest.

**EMT**

1. Assess the patient and provide initial care, including oxygen and vascular access, per **A.2 General Assessment and Care**.

| ADULT   | PEDIATRICS (less than 60 kg)  |
|---|---|
| <ol style="list-style-type: none"> <li>2. Assess ABC's; confirm absence of pulse and adequate breathing.</li> <li>3. Perform effective and uninterrupted CPR per <b>7G High Performance CPR</b> until AED or defibrillator is available and follow instructions in <b>2B Cardiac Arrest</b>.</li> </ol> | <ol style="list-style-type: none"> <li>2. Assess ABC's; confirm absence of pulse and adequate breathing.</li> <li>3. Perform effective and uninterrupted CPR per <b>7G High Performance CPR</b> until AED or defibrillator is available and follow instructions in <b>2B Cardiac Arrest</b>.</li> </ol> |

**PARAMEDIC**

| ADULT   | PEDIATRICS (less than 60 kg)   |
|---|--|
| <p><b><u>V-fib and monomorphic V-tach</u></b></p> <ol style="list-style-type: none"> <li>4. After second shock and if vascular access is obtained administer <b>amiodarone 300 mg IV/IO</b>.</li> <li>5. After third shock administer <b>amiodarone 150 mg IV/IO</b>.</li> </ol> <p><b><u>Polymorphic V-tach or Torsades de Pointes</u></b></p> <ol style="list-style-type: none"> <li>6. Administer <b>magnesium sulfate 2 grams IV/IO</b>.</li> </ol> <p><b><u>For all cases</u></b></p> <ol style="list-style-type: none"> <li>7. Determine if patient is a candidate for early transport<sup>1</sup>.</li> <li>8. Determine if patient is a candidate for direct transport to the U of M Cath Lab for refractory VF. See procedure at end of this protocol.</li> <li>9. If early transport indicated, transport while doing the following                     <ul style="list-style-type: none"> <li>• Apply and turn on <b>LUCAS</b> (if not already done so)</li> </ul> </li> </ol> | <p><b><u>V-fib and monomorphic V-tach</u></b></p> <ol style="list-style-type: none"> <li>4. After second shock and if vascular access is obtained administer <b>amiodarone 5 mg/kg IV/IO</b>.</li> <li>5. After third shock administer <b>amiodarone 2.5 mg/kg IV/IO</b>.</li> </ol> <p><b><u>Polymorphic V-tach or Torsades de Pointes</u></b></p> <ol style="list-style-type: none"> <li>6. Administer <b>magnesium sulfate 50 mg/kg IV/IO. (Maximum dosage 2 grams)</b>.</li> </ol> <p><b><u>For all cases</u></b></p> <ol style="list-style-type: none"> <li>7. Determine if patient is a candidate for early transport<sup>1</sup>.</li> <li>10. Determine if patient is a candidate for direct transport to the U of M Cath Lab for refractory VF. See procedure at end of this protocol.</li> <li>9. If early transport indicated, transport while doing the following                     <ul style="list-style-type: none"> <li>• Apply and turn on <b>LUCAS</b> (if not already done so and patient fits)</li> </ul> </li> </ol> |

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| ADULT   | PEDIATRICS (less than 60 kg)  |
|---|---|
| <ul style="list-style-type: none"> <li>Secure patient to the stretcher</li> <li>Administer <b>amiodarone</b> or <b>magnesium sulfate</b> as above (if not already done)</li> <li>Analyze rhythm no more often than every 5-6 minutes and defibrillate if indicated.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>10. After 30 minutes of resuscitation with no change in status, contact Medical Control for order to terminate efforts.</p> </div> | <ul style="list-style-type: none"> <li>Secure patient to the stretcher</li> <li>Administer <b>amiodarone</b> or <b>magnesium sulfate</b> as above (if not already done)</li> <li>Analyze rhythm no more often than every 5-6 minutes and defibrillate if indicated.</li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>10. After 30 minutes of resuscitation with no change in status, contact Medical Control for order to terminate efforts.</p> </div> |

**DOCUMENTATION KEY POINTS**

- Pertinent history, including events leading up to the arrest.
- Assessments and treatments provided prior to your arrival, including specific time(s) of shocks and other interventions.
- ECG tracing documentation of all rhythm interpretations, treatment decisions, and changes in the patient’s clinical condition.
- Rationale for field discontinuation of resuscitation efforts or early transport.
- Direction provided by medical control.

**NOTES**

<sup>1</sup>When all of the following conditions exist the patient should be strongly considered for early transport. Call medical control for advice if unsure.

- 3 consecutive rhythm analysis showing v-tach or v-fib
- End-tidal readings > 20 mmHg
- Advanced airway secured
- Patient able to have Lucas CPR performed during transport (large or small patients may be considered for transport but mode of transport may need to be modified to allow quality CPR).

**HEMT Refractory VF/VT Protocol  
Direct transport to U of M Cath Lab**

Field Providers:

1. Refractory VF/FT is defined as initial rhythm VF/VT with VF/FT that persists after 3 consecutive CPR/Analyze/Shock sequences in a row.
2. Administer 300 mg Amiodorone IV
3. Begin to package patient (must have secured airway, ETCO2 greater than 20, and fits the LUCAS)
4. Give the family the following script:

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Your loved one is suffering from a type of cardiac arrest which has a treatment that is only available at the University of Minnesota and may improve his/her chance of survival. We may be able bring him/her there and he/she might be able to get that treatment. Whether we go to the University is entirely your choice. If you would like, we can call ahead to see if that treatment is available today. Again, it is not guaranteed that he/he will obtain this treatment, but it is clear that he/he will not receive that treatment at any of the other hospitals. Would you like us to call to see if the University is available to take him/her? It is your choice.

5. Call On-duty Supervisor or Dr. Wesley if Supervisor not available
6. Provide report addressing each of the following
  - a. Patient under age 70
  - b. Down time plus estimated transport time to the U is less than 50 minutes
  - c. ET CO2
  - d. DNR status
  - e. Previously living independently
7. Supervisor will contact Dr. Yannopoulos and then call crew to confirm accepted or denied. If accepted, make standard call in to MRCC. Do not make any request of them regarding cath lab. Crew will be met in ED and escorted to cath lab. If denied, transport to facility of family's choice

Supervisor:

1. Calls Dr. Yannopoulos' phone number: **612-616-7575**
2. The phone number you are calling is Dr. Yannopoulos' personal cell phone. He clear the acceptance of the patient at the University. Even if the University is closed, Dr. Yannopoulos may still be able to accept the patient. He will alert both the Emergency Department and the cath lab that the patient is on the way.
3. Allow up to 10 rings for Dr. Yannopoulos to answer his phone. If the phone is not answered in that period of time or the call hangs up inform crew that case is denied and to continue to routine destination.

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