Pulseless Ventricular Tachycardia/Ventricular Fibrillation Algorithm (Figure 8-5)

Assess ECG rhythm

Shockable?

YES

Shock (defibrillate) \( \times 1 \)
Resume CPR—5 cycles (about 2 minutes)
Without interrupting CPR, start IV/IO
During CPR, give vasopressor
Epinephrine 1 mg every 3-5 min
OR
Vasopressin 40 U \( \times 1 \) in place of first or second epinephrine dose

NO

Assess ECG rhythm

Shockable?

YES

Shock (defibrillate) \( \times 1 \)
Resume CPR—5 cycles (about 2 minutes)
Without interrupting CPR, start IV/IO
During CPR, consider antiarrhythmic
Amiodarone 300 mg IV/IO initial dose; consider repeat dose of 150 mg \( \times 1 \) in 5 min
OR
Lidocaine 1-1.5 mg/kg IV/IO initial dose (if amiodarone not available), then 0.5-0.75 mg/kg prn every 5-10 min; max cumulative dose 3 mg/kg
Consider magnesium 1-2 g IV/IO for torsades de pointes
Consider reversible causes of arrest

NO

Asystole?
Go to asystole algorithm
Electrical activity present?
Check pulse
No pulse, go to PEA algorithm
Pulse present? Assess vital signs, begin postresuscitation care

Algorithm assumes scene safety has been assured, personal protective equipment is used, no signs of obvious death or presence of do not resuscitate order, and previous step was unsuccessful.

Figure 8-5 • Pulseless VT/VF algorithm.

Updated! Barbara Aehlert’s unique treatment algorithms are user friendly and easy to remember – and all have been completely revised to reflect the 2005 emergency cardiac care guidelines, ensuring you are learning the most up-to-date information available.

First Impression: Sick or not sick?
Primary survey
Unresponsive?
Open airway, give 2 breaths
Give oxygen when available
If no pulse, 30 compressions/2 breaths
Attach AED or monitor/defibrillator

REASSESS/MONITOR
• Airway
• Oxygenation/ventilation
• Paddle/pad position/contact
• Effectiveness of CPR
• No \( O_2 \) flowing over patient during shocks
Attempt/verify:
• Advanced airway placement
• Vascular access
Monitor and treat:
• Glucose
• Electrolytes
• Temperature
• \( CO_2 \)

SHOCKS
Defibrillation
• Monophasic: 360J all shocks
• AED: Per manufacturer
• Biphasic: Per manufacturer
• Biphasic unknown: 200J initially, then same or higher as first shock

REVERSIBLE CAUSES
• Pulmonary embolism—anticoagulants? surgery?
• Acidosis—give oxygen, ensure adequate ventilation
• Tension pneumothorax—needle decompression
• Cardiac tamponade—pericardiocentesis
• Hypovolemia—replace volume
• Hypoxia—give oxygen, ensure adequate ventilation
• Heat/cold—cooling/warming measures
• Hypo—hyperkalemia (and other electrolytes)—correct electrolyte abnormalities
• Myocardial infarction—fibrinolytics?
• Drug overdose/accidents—antidote/specific therapy