



# Ventricular Tachycardia with Pulse

## Medical

### CRITERIA

- Patient with sustained VT with a pulse
- A patient with chest pain, shortness of breath, altered mental status, pulmonary edema, or signs and symptoms of shock should be considered unstable. Evaluate the patient as a whole and not just by the presence of ventricular tachycardia and a pulse. **If a stable patient becomes unstable during the course of treatment, move immediately to the unstable VT protocol (below).**

### PROTOCOL

| <u>Stable Wide Complex Tachycardia with a Pulse</u>   |   |            |
|---|---|------------|
| <b>EMR</b>  | Follow <i>General – Universal Patient Care/Initial Patient Contact protocol.</i>  | <b>EMR</b> |
| <b>EMT</b>  | Obtain 12-lead ECG, right-sided ECG or 15-lead ECG.   | <b>EMT</b> |
| <b>I</b>  | <b>If monomorphic</b> , administer <i>Adenosine (Adenocard) 6 mg rapid IV</i> , followed by a rapid <i>0.9% Normal Saline 20 mL flush.</i>  | <b>I</b>   |
| <b>I</b>  | If no conversion within 2 minutes, administer <i>Adenosine (Adenocard) 12 mg rapid IV</i> followed by a rapid <i>0.9% Normal Saline 20 mL flush.</i>  | <b>I</b>   |
| <b>I</b>  | If no conversion, administer <i>Amiodarone (Cordarone) 150 mg IV</i> diluted in <i>0.9% Normal Saline 100 mL over 10 minutes</i> (15 mg per minute).  | <b>I</b>   |
| <b>MC</b>   | If no conversion within 2 minutes <i>and patient remains stable.</i>  | <b>MC</b>  |
| <u>Unstable Wide Complex Tachycardia with a Pulse</u> |   |            |
| <b>EMR</b>  | Follow <i>General – Universal Patient Care/Initial Patient Contact protocol.</i>  | <b>EMR</b> |
| <b>EMT</b>  | Obtain 12-lead ECG, right-sided ECG or 15-lead ECG.   | <b>EMT</b> |
| <b>I</b>  | For mild sedation, if time and patient condition permits, administer <i>Midazolam (Versed) 2 mg IN/IM/IV/IO.</i>  | <b>I</b>   |
| <b>I</b>  | Wide regular: synchronized cardioversion <b>100 joules</b> ; provide subsequent escalating <b>synchronized</b> cardioversion doses as needed and based on your monitor/defibrillator manufacturer recommendations (joule settings vary by specific device), until the maximum cardioversion amounts have been attempted <b>BEFORE</b> proceeding to the medication drip.<br><br>Wide irregular: <b>DO NOT</b> use synchronized cardioversion, defibrillate per manufacturer guidelines. | <b>I</b>   |
| <b>I</b>  | If VT does not convert after reaching maximum synchronized cardioversion doses, administer <i>Amiodarone (Cordarone) 150 mg IV/IO</i> diluted in <i>0.9% Saline 100 mL over 10 minutes</i> (15 mg per minute).<br><br>If VT is regular and monomorphic, consider <i>Adenosine 6mg rapid IV/IO push followed by a rapid 0.9% Normal Saline 20 mL flush.</i>  | <b>I</b>   |
| <b>I</b>  | Synchronized cardioversion at highest energy setting.<br>If cardioversion is still unsuccessful, monitor patient status   | <b>I</b>   |
| <b>I</b>  | If VT initially responds to cardioversion but recurs, administer <i>Amiodarone (Cordarone) 150 mg</i> diluted in <i>0.9% Normal Saline 100 mL over 10 minutes.</i> Perform synchronized cardioversion again at the previously successful energy level and escalate joule dosage if necessary.   | <b>I</b>   |



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### PEARLS

- **DO NOT** delay immediate cardioversion for acquisition of the ECG and/or administration of medications in the unstable patient.
- During synchronized cardioversion, select the energy dose recommended for the specific cardiac rhythm.
- Anterior/Posterior pad placement for synchronized cardioversion may be beneficial, as it maximizes the current flow through the atria.
- If additional doses of synchronized cardioversion are necessary, escalate joules dosage based your cardiac monitor/defibrillator manufacturer's guidelines; these will differ from brand to brand.
- Reset the “**sync**” mode after each synchronized cardioversion attempt if more attempts at synchronized cardioversion are needed; most devices default back to an unsynchronized mode.

| <b>Synchronized Cardioversion Initial Recommended Doses</b> |  |
|---|--|
| Narrow regular complex                                      | <b><i>50-100J</i></b>                                |
| Narrow irregular complex                                    | <b><i>120 J biphasic or 200 J monophasic</i></b>     |
| Wide regular complex  | <b><i>100J</i></b>                                   |
| Wide irregular complex                                      | <b><i>Defibrillation dose (NOT synchronized)</i></b> |