

CENTRAL CALIFORNIA
EMERGENCY MEDICAL SERVICES
A Division of the Fresno County Department of Public Health

Manual	Emergency Medical Services Administrative Policies and Procedures	Policy Number 530.07
Subject	Paramedic Treatment Protocols VENTRICULAR TACHYCARDIA WITH PULSES	Page 1 of 2
References	Title 22, Division 9, Chapter 4 of the California Code of Regulations	Effective Fresno County: 01/15/82 Kings County: 04/10/89 Madera County: 06/15/85 Tulare County: 04/19/05

STANDING ORDERS	
1. Assessment	ABCs
2. Secure Airway	Protect with position, basic airway maneuvers, pharyngeal airway, advanced airway if indicated, assist respirations as needed, suction as needed.
3. Oxygen	15 L per minute per non-rebreathing mask - start at 2 L by cannula if patient has a history of COPD. If intubated, ventilate with bag-valve with 100% oxygen. Refer to EMS Policy #530.02.
4. IV Access	LR TKO – standard tubing (the priority of starting the IVs and cardioversion is the judgment of the paramedic – contact Base Hospital if questions).
5. Reassess	For serious signs and symptoms – patient must demonstrate one or more of the following: acute altered mental status, severe chest pain, severe shortness of breath, systolic BP less than 80, pulmonary edema.
A. Unstable, heart rate <u>greater than 150 beats/minute</u> with serious signs or symptoms related to tachycardia.	
1. Oxygen	15 L/min. per non-rebreathing mask of 100% via bag-valve-mask.
2. Midazolam	If time allows for the conscious patient, 4 mg slow IV push. May be repeated once if needed. Consider Midazolam 8 mg slow IV push for the large patient (i.e., over 200 pounds).
3. Fentanyl	If time allows for the conscious patient, 25-100 mcg IV push. May be repeated once if needed.
4. Cardiovert	Synchronized at 100 J or biphasic equivalent. (Early Base Hospital Contact after first cardioversion if questions), 200 J., 360 J or biphasic equivalent. If conversion to a stable rhythm, administer Amiodarone 150 mg IV/IO push over 10 minutes. Repeat Amiodarone in 30 minutes if prolonged transport time, 150 mg IV/IO push over 10 minutes. Transport and contact Base.

STANDING ORDERS – CONTINUED ON NEXT PAGE

Approved By	Revision
EMS Division Manager	05/01/2014
EMS Medical Director	

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STANDING ORDERS (CONTINUED)

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| 5. Reassess | Treat as appropriate for rhythm |
| 6. Amiodarone | 150 mg IV push over 10 minutes if patient does not convert. |
| 7. Cardiovert | Synchronized at 360 J or biphasic equivalent. If conversion to a stable rhythm, administer Amiodarone 150mg IV push over 10 minutes. |
| 8. Amiodarone | 150 mg IV push over 10 minutes if patient does not convert. |
| 9. Cardiovert | Synchronized at 360 J or biphasic equivalent. |
| 10. STAT Transport | |
| 11. Contact Hospital | Per EMS Policy #530.02. |

B. Stable or Borderline, all others with Ventricular Tachycardia and a pulse

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| 1. Oxygen | Low flow. Refer to EMS Policy #530.02. |
| 2. Transport | |
| 3. Contact Hospital | Per EMS Policy #530.02. |

BASE HOSPITAL ORDERS**A. Stable or Borderline**, all others with Ventricular Tachycardia and a pulse

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| 1. Amiodarone | 150 mg IV push over 10 minutes. If patient does not convert in 30 minutes, re-bolus with Amiodarone 150 mg IV push over 10 minutes. |
| 2. MIDAZOLAM | 4 MG SLOW IV PUSH. MAY BE REPEATED ONCE. |
| 3. FENTANYL | 25-100 MCG IV PUSH. MAY BE REPEATED ONCE IF NEEDED. |
| 4. CARDIOVERT | CONSIDER CARDIOVERSION 200 J., AND IF NO CHANGE, 360 J <u>OR</u> BIPHASIC EQUIVALENT. |

B. Suspected Hyperkalemia

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| *1. Calcium | 1000 mg (10 ml) of 10% CaCl ₂ IV push. |
| 2. Sodium Bicarbonate | 1 mEq/kg bolus, then ½ mEq/kg every 10 minutes. |

SPECIAL CONSIDERATION AND PRIORITIES

- Maximum dose of Amiodarone **never to exceed 300 mg.**
- In recurrent V-Tach, use the lowest cardioversion energy level that has worked previously on this patient.
- Allow 60 seconds after medication administration before cardioversion.
- Consider Calcium in hyperkalemia or calcium channel blocker toxicity.
- Consider hyperkalemia in dialysis patients, patients with shunts or fistulas, or if history of renal failure. Consider Sodium Bicarb after Calcium.
- In a tricyclic ingestion, consider Sodium Bicarb.
- If delays in synchronization occur and clinical conditions are critical, go to immediate unsynchronized shocks.