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MEMORANDUM

TO: Agency Chief Offices, EMS Training Officers

FROM: Arthur C. “Ace” Ernst, M.D., Regional Medical Director

RE: Replacement for Cardizem in the Regional ALS Drug Box

DATE: March 2, 2007

The ODEMSA Medical Control Committee, with the endorsement of the ODEMSA Pharmacy Committee, has decided to use the medication Metoprolol to replace the Cardizem Lyo-Ject in the regional ALS Drug Boxes. Metoprolol already is carried in the Drug Boxes.

The Cardizem delivery system is out of production and is disappearing from the ALS Drug Boxes as it is used or goes out of date. Effective March 9, a new protocol will go into effect for the treatment of tachycardia, and in particular atrial fibrillation.

The protocol will be sent to agencies by email and by surface mail, and will be available on ODEMSA’s webpage (www.odemsa.vaems.org) on March 9.

We will ask hospital pharmacies to remove the existing Cardizem Lyo-Ject systems as Drug Boxes come in for exchange. We do not expect any problem with the transition. Please call me or ODEMSA’s Training Director with any questions.

ACE/jd

5-7 TACHYCARDIA

With Pulses

- Maintain patent **airway**; assist **breathing** as needed
- Give **oxygen**
- Monitor ECG (Identify rhythm), Blood pressure, oximetry
- Identify and treat reversible causes

- Is patient stable?**
- Unstable or Serious Signs / Symptoms include;
 - Chest Pain
 - Altered mental status
 - Shortness of breath
 - Diaphoresis
 - Other S/S associated with shock
 - Note: rate related symptoms are uncommon if heart rate is <150/min

- Perform immediate synchronized cardioversion**
- Establish IV Access and consider sedation DO NOT delay cardioversion
 - If pulseless arrest develops see pulseless arrest algorithm

- Stable**
- Establish IV access
 - Obtain 12 lead ECG
 - Is QRS narrow (<0.12 sec)?

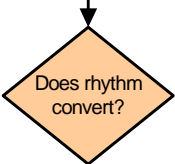


- Regular**
- Attempt vagal maneuvers
 - Give **adenosine** 6mg rapid IV push. If no conversion, give 12mg rapid IV push; may repeat 12 mg dose once

- Irregular**
- Probable **Atrial fibrillation** or possible **atrial flutter** or **MAT** (multifocal atrial tachycardia)
- **contact medical control** for orders to give **metoprolol**. Patient must have SBP >120mm hg, no signs of CHF, and no hx asthma
 - If approved, give **metoprolol** 2.5 mg over 5 min
 - repeat with 2.5mg - 5.0 mg over 5 minutes if needed
 - stop administration if pt develops hypotension, symptomatic bradycardia, or adverse reaction
 - rapid transport

- Regular**
- If ventricular tachycardia or uncertain rhythm**
- **Amiodarone** 150mg IV over 10 minutes (Maintenance 1mg/minute)
 - Prepare for elective **synchronized cardioversion**

- Irregular**
- If atrial fibrillation with aberrancy**
See Irregular narrow complex Tachycardia
- If pre-excited atrial fibrillation (AF + WPW)
 - Avoid nodal blocking agents (ie **adenosine, digoxin, metoprolol**)
 - Consider amiodarone 150mg IV over 10 minutes
 - If **torsades de pointes**, give **magnesium** 1-2 gram over 5-60 min.



- Converts**
- If rhythm converts, probable reentry SVT.**
- Observe for recurrence
 - treat recurrence with adenosine

- Does not convert**
- If rhythm does not convert, possible A-flutter, Junctional tach or ectopic atrial tach:**
- Control rate
 - treat underlying causes
 - Contact Medical Control for orders. (possible B-Blockers)
 - If approved, give **metoprolol** 2.5 mg over 5 min

- During Evaluation**
- Secure and verify airway and vascular access
 - Prepare for cardioversion
 - **Search for and treat possible contributing factors**
 - Hypovolemia
 - Hypoxia
 - Hydrogen Ion (acidosis)
 - Hypo / Hyperthermia
 - Hypo / Hyperkalemia
 - Toxins
 - Tamponade, cardiac
 - Tension Pneumothorax
 - Thrombosis (coronary or pulmonary)
 - Trauma