

**District III EMS
Quality & Improvement
“Case of the Month - April 2005”**

This month's case involves the pre-hospital management of a patient with an arrhythmia and questions about the establishment of IV access. If you have any questions or comments, please feel free to contact me at

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Chief Complaint: Heart Racing

Pre-hospital course: An ALS crew arrives at the home of a 68 yo CAO3 male patient complaining of "feeling his heart racing". The pt notes sudden onset of symptoms about 1 hour prior to EMS arrival. He notes dizziness especially when standing. He denies chest pain, shortness of breath, nausea or vomiting. The patient has a significant cardiac history including triple bypass heart surgery two months prior. He is on metoprolol, lipitor, and daily aspirin. Initial physical exam finds an alert male in no acute distress with warm pink skin and clear lung sounds. Vital signs: Pulse 188, BP 100/palp, oxygen saturation 100% room air. Cardiac monitor is noted to be a regular rhythm at 180 bpm.

The patient is placed on 10 liters NRB facemask. Medical control is contacted for permission to start IV access and this is denied. The patient is transported without incident to the ED.

Emergency Department Course: The patient arrives in the ED in no acute distress and is noted to be tachycardic. An EKG is obtained which shows a supraventricular tachycardia (SVT) at a rate of 180 bpm and diffuse ST depressions. The patient is given 6 mg iv of adenosine and converts to a normal sinus rhythm (NSR) at 80 bpm. His symptoms resolve. He is observed in the ED for one hour and remained stable. After consultation with cardiology the patient's metoprolol dose was increased and he was discharged home.

Quality Improvement: This patient was suffering from an arrhythmia. He was in a supraventricular tachycardia (SVT) at 180 beats per minute. It would have been appropriate to start an IV in this patient in the pre-hospital setting. Any patient with a cardiac dysrhythmia is at risk for rapid decompensation. It is prudent to have established IV access in these patients before a problem occurs. Placing an IV in the field would also facilitate the more rapid administration of medications, such as adenosine, upon arrival to the ED. The crew recognized this patient's need for an IV and contacted Medical Direction for permission which should not have been denied. In addition, this IV could have been placed under standing orders outlined in the Intravenous Protocol without Medical Control permission.

Take Home Message: All patients with an arrhythmia can have a saline lock initiated by standing order.

Review the Intravenous Protocol:

A Saline lock may be initiated by standing order for:

Altered level of consciousness

Arrhythmia

Bites and Envenomation if more than a localized reaction

Cardiac Arrest

Chest Pain, age 40 and over

Diabetic Emergencies

Dyspnea, age 40 and over

Head Trauma, if there is an altered level of consciousness

Nosebleed if still bleeding

Seizures

An Intravenous of Lactated Ringer's Solution at KVO may be initiated by standing order for:

Amputations
Anaphylaxis
Cold Emergencies, if there is an altered level of consciousness
Hypotension
Major Multiple System Trauma
Nausea and Vomiting
Pregnancy related emergencies
Skeletal Injuries
Spine Trauma with neuro-deficit

Medical Direction On-Line shall be sought for:

Abdominal Pain
Burns
Headache
Heat Emergencies
Hemorrhage
Hypertension
Poisoning and Overdose
Weakness/Malaise
Administration of a fluid bolus

This is a long list, with many options and qualifiers, which likely added to the confusion in this and many other cases. Bottom line: when in doubt, call Medical Control, and err on the side of starting an IV.