



Emergency Medical Services
Partners

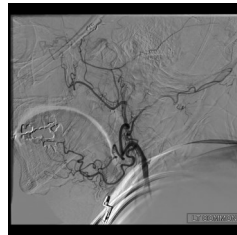
August 2018, Issue 99

health.uconn.edu/ems

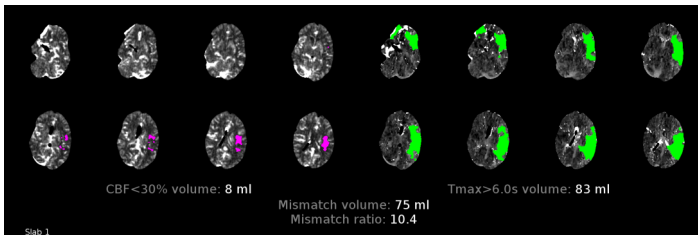
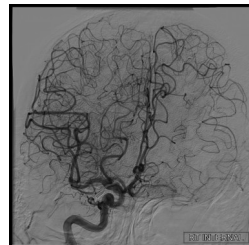
AMR Stroke Alert



A patient with right sided weakness, severe dysarthria, aphasia and sensory loss was brought to **UConn John Dempsey Hospital** as a prehospital **STROKE ALERT** thanks to **American Medical Response** paramedic Brittany Thibault and her partner Samuel Purcell. The patient was brought directly to CT scan on the EMS stretcher. The CT scan was clear.



TPA was administered within 29 minutes of arrival while the patient was still in CT scan. Advanced CTA imaging showed a M2 occlusion & lack of flow within the left ICA. Advanced CT Perfusion reviewed showed a clinical mismatch (below) deeming this patient a Thrombectomy candidate. The angiogram revealed the good collateral flow (side). The patient showed improvement on reassessment so no further intervention was necessary. The patient is moving all extremities and her strength and speech are greatly improved. Great job by all!



Purple indicates area of the brain that has been damaged.
Green indicates further area at risk.

Trauma Care at UConn Health John Dempsey Hospital

UConn Health/John Dempsey Hospital is in the process of applying for verification as a **Level III Trauma Center**.



EMS should still bring all trauma cases meeting state triage guidelines to Level I and Level II centers as mandated by regulation.

A Level III Designation will mean that we have installed rigorous processes and training standards to provide the best care possible to patients with moderate trauma and to stabilize and transfer out those patients with major trauma who may arrive here by private car or who are too unstable for EMS to transport directly to a Level I or Level II.

Connecticut Trauma Triage Guidelines

Per Connecticut regulations, the following trauma patients should be brought to a Level I or Level II trauma facility:



1. (A) Glasgow Coma Scale of twelve (12) or less; or (B) systolic blood pressure of less than ninety (90) mm Hg; or (C) respiratory rate of less than ten (10) or more than twenty-nine (29) breaths per minute.
2. (A) gunshot wound to chest, head, neck, abdomen or groin; (B) third degree burns covering more than fifteen (15) per cent of the body, or third degree burns of face, or airway involvement; (C) evidence of spinal cord injury; (D) amputation, other than digits; or (E) two (2) or more obvious proximal long bone fractures.

Triage Questions

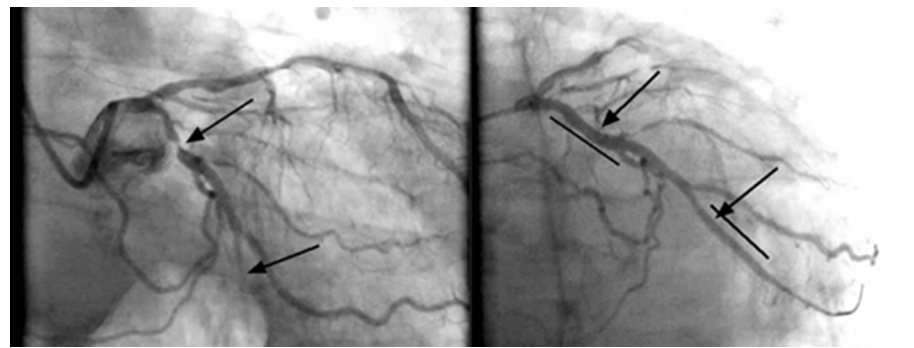
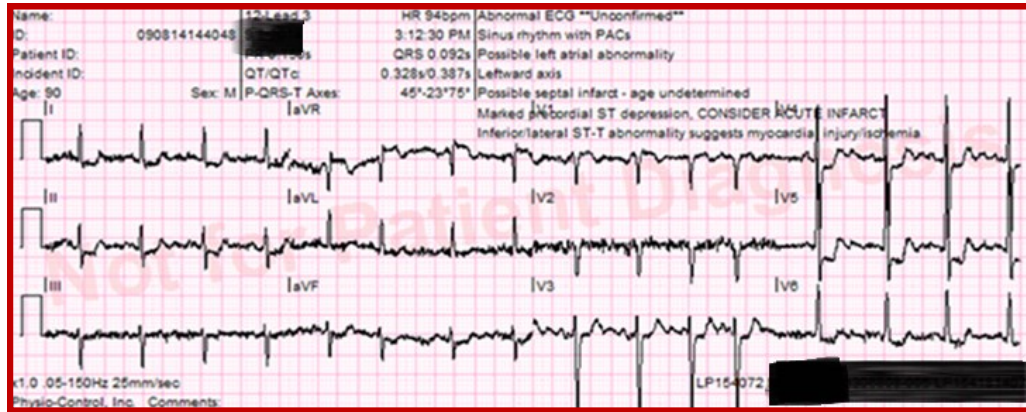
When in doubt regarding determination of destination hospital, contact medical direction.

ST Elevation in aVR (Left Main Equivalent or Triple Vessel Disease)

ST elevation in Lead aVR greater than 1mm and greater than the elevation in Lead VI, accompanied by widespread ST depression in leads I, II, and V4-V6 in a patient with symptoms of acute coronary syndrome should be taken very seriously by paramedics. ST elevation in these circumstances can indicate a severe occlusion and/or triple vessel disease. ST elevation in aVR is considered a STEMI equivalent and should be treated similarly, including calling in a Possible STEMI ALERT. The patient may be a candidate for coronary catheterization or cardiac by-

pass.

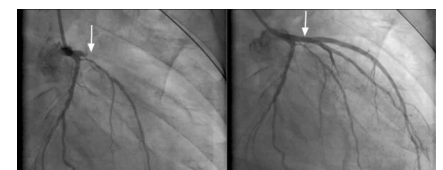
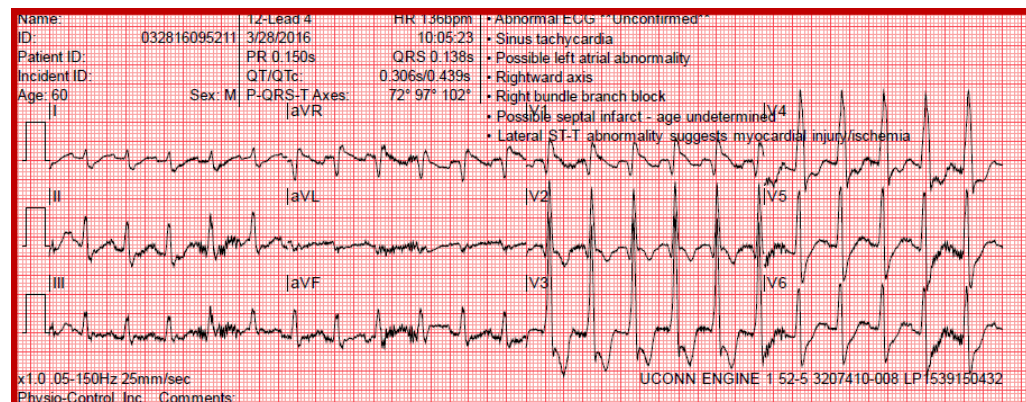
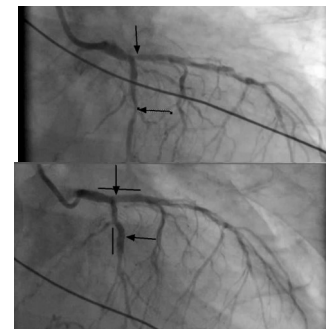
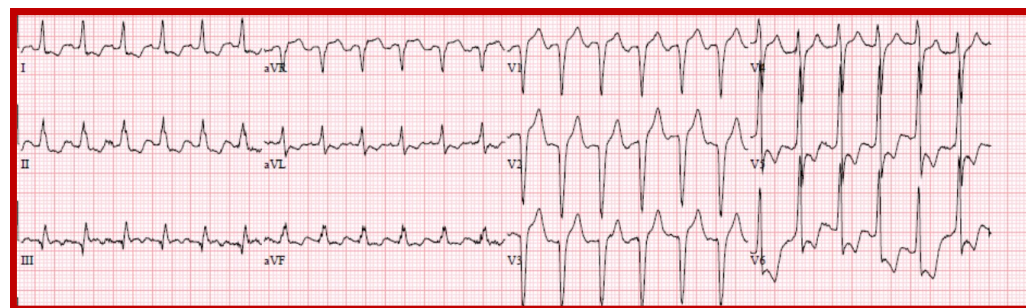
This patient suffered from severe triple vessel disease and had a 95% occlusion in the proximal left circumflex and an occluded left marginal artery, a 90% occlusion in the RCA, and a 30% occlusion in the LAD. He successfully received stenting to the circumflex and marginal arteries.



The classical pattern of left main coronary artery (LMCA) occlusion:

Widespread horizontal ST depression, most prominent in leads I, II and V4-6

- ST elevation in aVR \geq 1mm
- ST elevation in aVR \geq V1

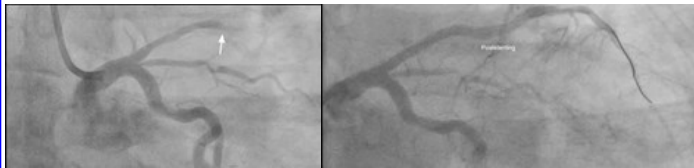


July STEMI Kudos

American Medical Response

paramedic Nicole Schieferstein and her partner Ryan McNair responded for a patient with nonradiating left shoulder pain accompanied by nausea for two days. Schieferstein did a 12-lead ECG, which she transmitted to the **UConn John Dempsey ED**.

55 Minute Door- to-Balloon. 89 Minute First Medical Contact-to-Balloon Time.



West Hartford Fire

Department paramedic Taylor Salva, the EMS crew from West Hartford Station 2, **American Medical Response** paramedic Josh Rosenthal and his partner EMT Yahaira Gonzales responded for a patient who felt lightheaded after a bout of intense physical activity. Salva did a rapid 12-lead ECG, which revealed the patient was suffering from an inferior myocardial infarction. Salva transmitted the ECG to **UConn John Dempsey Hospital** where Dr. Sara Blomstrom immediately activated the cardiac cath lab based on the ECG, even before the EMS team's STEMI Alert patch. **51 Minute Door- to-Balloon. 78 Minute First Medical Contact-to-Balloon Time.**



July Stroke Kudos

Simsbury Ambulance paramedic Shannon Harvill and her partner Stephen Goeben responded for a patient with sudden onset of right-sided weakness, expressive aphasia and dysarthria. They called in a **STROKE ALERT** to **UConn John Dempsey Hospital**, along with Last Known Well-



time, Blood sugar and Cincinnati Stroke Scale. The patient was taken directly to CT Scan on the EMS stretcher. The scan was negative for bleeding. The patient received tPA within 29 minutes of arrival at the ED door. Thanks to the rapid stroke identification and speedy care, the patient showed improvement in her symptoms and was released home after a five day stay.

Research Corner: Epinephrine in Cardiac Arrest

The use of epinephrine in prehospital cardiac arrest showed no difference versus placebo in determining favorable neurological outcome according to a long awaited randomized controlled study published on July 18, 2018 in the *New England Medical Journal*.



The trial showed epinephrine produced a higher rate of survival at 30 days than placebo, but that was accompanied by almost twice the rate of severe neurological impairment. Over 8,000 patients were enrolled in the randomized double-blind trial conducted in the United Kingdom between December of 2014 and October 2017.

The thirty day survival rate was 3.2% in the epinephrine group versus 2.4% in the placebo group. At hospital discharge 31% of the epinephrine survivors had severe neurological impairment versus 17.8% in the placebo group.

Paramedics needed to treat 112 patients with epinephrine in order to produce one extra survivor and that survivor was much more likely to have a poor neurological outcome than a placebo survivor.

The authors of an accompanying editorial speculated that while epinephrine may increase return of spontaneous circulation, it may also “result in long-term organ dysfunction or hypoperfusion of the heart and brain.”

Will this result change AHA ACLS guidelines?

We will have to wait and see. The AHA has been very reluctant in the past to make changes in the ACLS cardiac arrest epinephrine recommendation despite multiple trials showing no benefit or possible harm. Perhaps they will further temper their current recommendation:

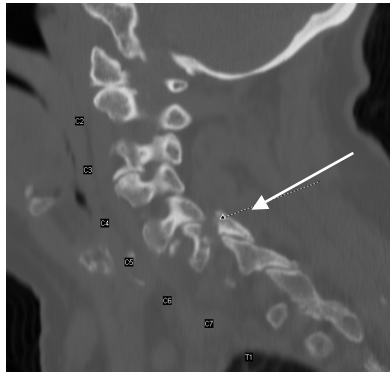
Standard-dose epinephrine (1 mg every 3 to 5 minutes) may be reasonable for patients in cardiac arrest (Class IIb, LOE B-R).

In the meantime, what does this study mean for front line EMS providers?

Focus on good CPR and timely defibrillation — two interventions that have been proven to make a difference in survival with good neurological function.

Trauma Case of the Month: Neck Fracture

An elderly female fell down a flight of stairs and was observed to have left arm weakness and severe neck pain. She was called in as a stroke alert. Further assessment in the ED showed generalized, not focal weakness. A CT scan of her neck revealed a C6 fracture. She was given steroids and underwent anterior cervical discectomy, osteophyctectomy, evacuation of anterior epidural hematoma, and fusion C6-C7. She showed improved strength and was discharged home three days later wearing a hard cervical collar with instruction to walk as much as she can.



Fracture of the right C6 pars with posterior displacement

Epinephrine

One of the biggest quality assurance issues we have is the failure to give epinephrine in cases of severe allergic reaction/allergic reaction. The number one reason people die of anaphylaxis is the failure of health care providers at all levels to deliver epinephrine or to deliver it rapidly. This was not the case in West Hartford recently when **West Hartford Fire Department** paramedic Taylor Salva responded for a man who had accidentally ingested tree nuts. The patient who was weak, pale, cool and diaphoretic with mild angioedema and hypotension received two 0.3 mg IM doses en route to **UConn John Dempsey Hospital**. He also received 50 mg Benadryl, and 500 ccs of Normal Saline. Thanks to the quick action of EMS, the patient did well and is back home with his family.



Trauma Alert-Elderly Falls/Blood Thinners

When bringing **UConn John Dempsey Hospital** patients over 65 who have fallen and are on blood thinners, please use the words **Trauma Alert** in your radio patch. Lights and sirens transport is not necessary if the patient is stable.



In anaphylaxis, epinephrine should not be delayed by taking the time to administer second-line medications such as diphenhydramine!

Anaphylaxis

Anaphylaxis is defined as:

- 1) Known allergen exposure with hypotension or respiratory compromise OR
- 2) Acute onset of symptoms with two of more of the following:
Respiratory compromise: (dyspnea, wheezing, stridor)
Angioedema or facial/lip/tongue swelling
Widespread hives, itching, swelling
Persistent gastrointestinal involvement (vomiting, diarrhea, abdominal pain)
Altered mental status, syncope, cyanosis, delayed capillary refill, or decreased level of consciousness associated with known/suspected allergenic exposure
Signs of shock

UConn EMS CME 2018



August – No CME
September 19, 2018
October 17, 2018
November 21, 2018
December 19, 2018



8:30-11:30 A.M.

Cell and Genome Building
400 Farmington Avenue, Farmington, CT

3 Hours CME
ALL EMS RESPONDERS WELCOME
Bagels and Coffee provided.

CONTACT US:

Any questions or suggestions about EMS? Looking for patient follow-up?



Contact EMS Coordinator Peter Canning at canning@uchc.edu or call (860) 679-3485.

UConn Health EMS Website

For news, educational information, CME schedule and past copies of our newsletter *Partners*, check out our website at:

health.uconn.edu/ems