



Emergency Medical Services *Partners*

February 2012, Issue 19

uconnems.uhc.edu

Anaphylaxis!

American Medical Response

paramedic Ron Talit responded recently to a patient in **West Hartford** having an allergic reaction to an unknown substance while cooking dinner. The patient self-administered an EpiPen. On Talit's arrival, however, Talit noticed the patient was still having a hard time breathing and was becoming severely diaphoretic. He quickly administered a second 0.3 mg of epinephrine 1:1000 intramuscularly. The patient whose pressure had dropped into the 60's systolic soon was feeling much better. Talit treated him with IV fluid, oxygen, Albuterol, Benadryl, and Solu-Medrol while safely transporting him to the UCONN Health Center.



While for most patients one dose of their EpiPen is enough to defeat an attack of anaphylaxis, up to 35 percent of patients require a second dose of epinephrine to treat their initial reaction. Additionally up to 20 percent may experience a second wave of anaphylaxis, which is most likely in the first 8 hours, but can occur as delayed as 72 hours after exposure to the antigen. This is one of the reasons why it is very important to transport any patient who has undergone a severe allergic reaction or episode of anaphylaxis.

Talit's patient was monitored further at the UCONN Health Center before being discharged with a new EpiPen in hand, and instructions to call 911 should any further symptoms develop.

Great job of care by Talit, AMR EMTs Jacquelyn Hornish and Thomas Merced and first responders from the **West Hartford Fire Department**.

Intranasal Fentanyl

On February 1, 2012, paramedics in the North Central region can start administering intranasal Fentanyl to patients in pain who meet the guidelines. Intranasal Fentanyl should be particularly useful in children and in patients where IV access is difficult or not desired.



Intranasal Fentanyl has been much studied in recent years and has been shown to be equivalent to IM and IV morphine as well as IV Fentanyl in providing pain control. One of the great advantages of IN Fentanyl is decreasing time to analgesia. While IV Fentanyl may start working in 2-3 minutes, IN Fentanyl, which takes about 10 minutes to reach full effect, can be given almost immediately and in virtually any environment. In one study IN Fentanyl significantly reduced time to analgesia and reduced the number of patients requiring IV access versus IV Morphine from 100% to 41%. No longer are we required to cause pain to children with an IV stick in order to provide pain relief.

Intranasal (IN) Fentanyl Dosing

Administer **Fentanyl** IN initial dose 1.5 mcg/kg (100 mcg max single dose). Administer half a single dose in each nare.



You may administer a second dose 1.5mcg/kg (100 mcg max single dose) if needed after 10 minutes, for a total maximum dose of 200 mcg.

If patient continues to need pain management after two IN doses, administer next dose IM or IV.

Facts about Anaphylaxis

1. Death can occur within minutes of exposure.
2. Most common causes of death from anaphylaxis are suffocation (45%) and shock (41%).
3. While skin manifestations are the most common signs of anaphylaxis, skin manifestations may be absent in up to 20% of anaphylaxis reactions.
4. Skin manifestations are often absent in patients with fatal or near fatal anaphylaxis.
5. Anaphylaxis can manifest solely as GI irritability, abdominal pain and vomiting.
6. Cold and exercise by themselves can produce an anaphylactic reaction.
7. 86% of pediatric cases are due to food allergens.
8. Peanuts are the most common food based cause of anaphylaxis.
9. Epi should be given IM, not SQ and if possible, preferably in the thigh as opposed to the deltoid.
10. In patients unresponsive to IM epinephrine, a steady administration of epinephrine IV drip is more effective than IV bolus. A slow continuous infusion should be titrated to hemodynamic monitoring. (Never give Epi 1:1000 IV).

Bottom Line: Prehospital anaphylaxis assessment and treatment requires a **high-index of suspicion** and **prompt definitive treatment with epinephrine.**

(Source: *Anaphylaxis: Mechanism and Management Clinical & Experimental Allergy* 2011)



February 15, 2012 CME

12-Lead ECG and STEMI: The Basics

Dr. Richard Kamin

Everything You Wanted to Know About Fentanyl (Including Intranasal)

Peter Canning, Paramedic, R.N.

Journal Review:

BEST EVIDENCE: IS INTRANASAL FENTANYL BETTER THAN PARENTERAL MORPHINE FOR MANAGING ACUTE SEVERE PAIN IN CHILDREN?

Emergency Medical Journal 2011

Case Reviews

Dr. Richard Kamin

Keller Auditorium 8:30 A.M

For copies of journal article, email Peter Canning at canning@uchc.edu

Upcoming CME 2012

Morning

February 15, 2012 (Wednesday)

March 21, 2012 (Wednesday)

April Skills TBA

May 16, 2012 (Wednesday)

Evening

March 28, 2012 (Wednesday)

Our monthly morning CMEs are held in Keller Auditorium at 8:30 A.M. Our quarterly evening CMEs are held in Keller Auditorium at 7:00 P.M.

Enter main door, take escalator down one floor. CMEs include general lectures, case reviews and journal article review. Daytime parking in main lot at top of hill is now limited to visitors and patients. If you are unable to find parking, please park in lower lots and take shuttle bus. For the evening CME, there is plenty of parking at the top of the hill. 3 Hours CME are offered.

**All EMS Responders and General Public
are Welcome!**

NCEMS Anaphylaxis Treatment Guidelines

Standing Orders

Oxygen

Epinephrine 1:1,000 0.3mg IM

IV **Normal Saline** titrated to a BP > 100 systolic

If patient remains unstable hemodynamically, administer **Epinephrine 1:10,000** 0.1 mg slow IV over 3 minutes, can be repeated X 2 to a maximum dose of 0.3mg IV or **IO**, titrated to effect. Repeat in 2 min prn.

Benadryl 1mg/kg Slow IVP (max. 50mg)

Solu-Medrol 125mg slow IVP

Albuterol 2.5mg via nebulizer for respiratory distress

Establish Medical Control (Possible Orders)

Dopamine Drip

Repeat doses of **Epinephrine or Epi-Pen**



UCONN Health Center EMS Web Site

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

uconnems.uchc.edu

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.