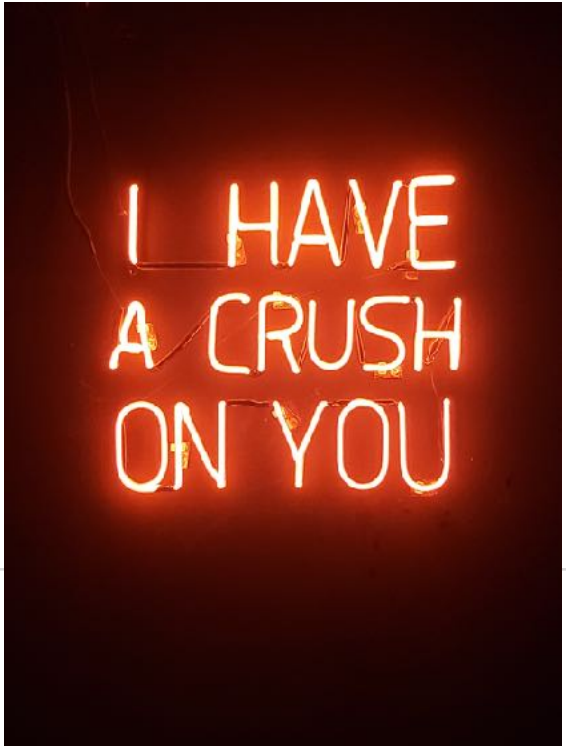

Managing crush injuries and rhabdomyolysis

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SCHOOL OF MEDICINE AND PUBLIC HEALTH

Project ECHO®
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Project Echo for Pediatric Care 2020-2022
I've Got a Crush on You: Managing Crush Injuries and Rhabdomyolysis
September 17, 2020
Jonathan Kohler, MD
Provided by the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP)

Intended Audience:
Emergency care professionals, including but not limited to, emergency room personnel, transportation specialists and emergency trauma coordinators. This includes MDs/DOs, RNs, APRNs, and Physician Assistants.

Objectives:
As a result of this educational regularly scheduled series, learners will be able to:
1.Objectively assess pediatric patients in emergencies.
2.Determine if the pediatric patient needs to be transferred to a specialty provider.
3.Collaborate with members of the healthcare team to assist pediatric patients in maintenance of chronic conditions without transfers.
4.Effectively communicate with interprofessional team members to provide patient-centered pediatric care.
5.

Policy on Disclosure
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Name/Role	Financial Relationship Disclosures	Discussion of Unlabeled/Unapproved uses of drugs/devices in presentation?
Jonathan Kohler, MD Presenter, Chair	No relevant financial relationships to disclose	No
Veronica Watson Coordinator	No relevant financial relationships to disclose	No
Randi Cartmill, Coordinator	No relevant financial relationships to disclose	No
Benjamin Eithun, MSN, RN, Coordinator	No relevant financial relationships to disclose	No
Kim Sprecker, OCPD Staff	No relevant financial relationships to disclose	No

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Follow the instructions below, and contact us at projectecho@surgery.wisc.edu with any questions.

1. Create account with the UW Interprofessional Continuing Education Partnership

https://ce.icep.wisc.edu

2. During the live presentation, and in the follow-up email, you will be provided a code. Text that code to a number we provide you, using a cell phone associated with your account.

Text **QUXZED** to 608-260-7097

(save this number as **ECHO Credit**, it will never change)

3. All done!! Log onto ICEP to view or print your credit letter.

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What I’m gonna tell you

- Not every injury shows up on CT scans and X-rays
- Crush injuries can cause severe illness and death
- Rhabdomyolysis should always be on your differential in trauma
- UAs can be deceptive
- Early treatment is essential
- ATVs are not great for kids

Telling you

- 12 year-old boy
- Took the family ATV out after lunch, didn't come home for dinner
- Found at the bottom of a ravine, legs under the ATV
- Prolonged extrication

You get him out

- Vitals:
  - HR 120
  - BP 110/70
  - RR 30
  - No obvious deformities
  - Dark red urine
  - Extreme pain in the legs
- Transported to the hospital
  - CT A/P normal; extremity films show
- A week later, he dies

What happened?

- Progressive abdominal and leg pain
- Obtundation leading to intubation
- Loss of pulses in the left leg
- Compartment syndrome in upper and lower leg -> fasciotomies
- Progressive metabolic acidosis
- Hemodynamic collapse

Let's Rewind

- Vitals:
  - HR 120
  - BP 110/70
  - RR 30
  - No obvious deformities
  - Dark red urine
- Now what?

Red Flags

- Red urine
  - Especially without a reason for a renal laceration
- Prolonged extrication
- Pain out of proportion on exam

How to un-ring the bell?

- Volume resuscitation –
  - Increase fluid to the kidneys
  - Increase perfusion to threatened muscle
  - Isotonic fluids, starting in the field
  - Start at 1-2 liters hour. Titrate to urine output
  - Bicarb can come later
  - Dialysis if things get bad

More things to think about

- Check and trend CKs (if < 5000, that's good)
- Urine myoglobin
- Compartment checks and ortho involvement early. The 5 P's:
  - Pain
  - Paresthesia
  - Paralysis
  - Pallor
  - Poikilothermia
- Consider associated diagnoses

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Questions & Comments!