



MEDIC 94 EDUCATION NEWSLETTER



January 2010

Clinical Thoughts on Hydrofluoric Acid Burns

The 2 mechanisms that cause tissue damage are *corrosive burn from the free hydrogen ions* and *chemical burn from tissue penetration of the fluoride ions*. Fluoride ions penetrate and form insoluble salts with calcium and magnesium. Soluble salts also are formed with other cations but dissociate rapidly. Consequently, fluoride ions release, and further tissue destruction occurs. Systemic fluoride ion poisoning from severe burns may be associated with hypocalcemia, hyperkalemia, hypomagnesemia, and sudden death. Deaths have been reported from concentrated acid burns to as little as 2.5% BSA. What are the symptoms of hypocalcemia?

Critical Care Review

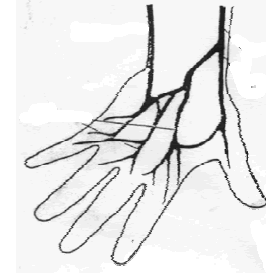
Parkland Formula

$(4ml \times weight (kg) \times BSA \text{ burned})$

Half the volume is administered during the 1st 8 hours. The other half is given over the next 16 hours.

Pediatric Points

Review of Hand Vasculature for IV Access



Policy Review

CRIME SCENES

A. Refer to PaDoH Treatment Protocol 919-1 **B.** The first priority of EMS personnel is personal safety then treatment. It is emphasized that while care is taken in minimizing patient and/or object removal, this is a secondary consideration, which should not hinder resuscitative efforts. **C.** Injured Patients 1. Once resuscitation/treatment has begun, the following shall apply: a. Enter and exit the scene by the same route. b. Avoid cutting through knife holes and bullet holes. c. Patients clothing once removed shall be provided to law enforcement personnel or secured in a safe place. d. Note the position of the body and other pertinent objects, weapons, medications etc. e. Law enforcement personnel may be supplied with the location of the body, pertinent objects and evidence that may have been altered/ moved by EMS care. **D.** Deceased Patients 1. If the patient is obviously dead on scene, and the cause of death appears to be other than of natural causes, the following procedures are to be followed: a. Do not touch or move the body. Secure the scene. b. Communicate scene information to the Coroner. c. Clear the scene after arrival of police or corner.

Answer: symptoms of hypocalcemia are Tetany, Chvostek sign, Trousseau sign

reference:emedicine Garry Wilkes, MBBS, FACEM