

A 15 years old boy is brought to the ED by rescue after he was found with his shirt caught on fire while he was lighting the backyard barbecue. The burned areas are dry, white leathery, anesthetic and circumferential all around the arms and forearms. Which of the following should be closely monitored?

- A) Body weight
- B) Peripheral pulses and capillary refill
- C) Blood gases
- D) Carboxihemoglobin levels
- E) Myoglobinemia and myoglobinuria

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The correct answer is B. Circumferential burns of the extremities pose a distinct hazard to peripheral circulation because the edema fluid resulting from the burn cannot expand under the unyielding envelope of the burn eschar. Escharotomy may be required.

Choice A. body weight does not change much with major burns. Fluid therapy is guided by urinary output and central venous pressure.

Choice C and D. Blood gases and carboxihemoglobin levels would be monitored with burns that can cause smoke inhalation.

Choice E. Myoglobinemia and myoglobinuria are useful in high voltage electrical burns or crushing injuries

A 5 year old girl is brought to the ED after a pot of boiling water burned her. Mom states that she took the pot off from the stove, slipped and the water fell right on her daughter. On physical exam, the girl is crying inconsolably. She has erythematous fluid containing blisters over entire chest and anterior surface of arms and forearms and redness of the lower portion of the face. Which of the following is the most appropriate step in management?

- A) notify child services
- B) Wet dressings
- C) apply neosporin ointment
- D) administer morphine
- E) apply sulfate nitrate

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The correct answer is D. Analgesia should be provided early and parental narcotic should be used in patients with large burns.

Choice A. Burns in children increase the concern for abuse, but involving Child protection services should be done after stabilizing the patient.

Choice B. Do not use wet dressings in large burns because they predispose to hypothermia.

Choice C. topical antibiotic should not be apply until appropriate wound care is performed.

Choice E. Silver nitrate is used less commonly because poor tissue penetration and potential for electrolyte abnormalities.

References:

Nelson essentials of pediatrics. Chapter 44 Burns

Up to date. Emergency care of moderate and severe thermal burns in children. Mark D Joffe, Md.

Up to date. Primary operative management of hand burns. Samuel P Mandell, MD MPH.

Pediatric pain control practices of North American Burn Centers. AU Martin-Herz SP, Patterson DR, Honari S, Gibbons J, Gibran N, Heimbach DMSO. J Burn Care Rehabil. 2003;24(1):26.