Burn MCI: Adult Fluid Resuscitation Overview

I. Burn Resuscitation Protocol

A. Document patient's TBSA burn using Lund-Browder diagram (Rule of Nines Diagram). Include only partial and full-thickness burns

B. Obtain weight or close estimate

II. First 24 Hours Post Burn

A. **TBSA < 20%;** Maintenance IVF only until taking adequate oral intake

B. **TBSA > 20% and Weight ≥ 30kg**

1. Calculate estimated fluid needs

a. 2cc of LR X kg body weight X %TBSA burned: --
administer half of calculated amount over the first 8 hours post burn
-- administer half of calculated amount over the next 16 hours

b. If urine output < ½ cc/kg/hour (goal is 30-50 cc/hour)
-- increase LR infusion by 1/3 of the hourly calculated fluid requirement

c. If urine output > 70cc/hour
-- dip urine to exclude glucosuria
-- decrease LR infusion by 1/3 of the hourly calculated fluid requirement

C. **TBSA ≥ 20% and Weight < 30kg**

1. Calculate estimated fluid needs

a. 3 cc of LR X kg of body weight X % TBSA burned (if ≤ 1 year old use D5LR)
-- administer half of calculated amount over the first 8 hours post burn
-- administer half of calculated amount over the next 16 hours

b. In addition to burn fluid requirements, also infuse maintenance IVF (calculated total for 24 hours)
-- 100 cc X first 10 kg of body weight
-- 50 cc X next 10 kg body weight
-- 20 cc X next 20 kg body weight

c. If urine output < 1cc/kg/hour
-- increase LR infusion by 1/3 of the hourly calculated fluid requirement

d. If urine output > 1cc/kg/hour
-- decrease LR infusion by 1/3 of the hourly calculated fluid requirement

D. **Place enteral feeding tube as soon as possible for all burns ≥ 20% TBSA**

III. Treatment of Low Urine Output

A. In adult patients with continued low urine output despite increased fluid rates

1. Place Cardiac Output Monitoring Device

a. If central pressures normal to high with low urine output
-- start low dose Dobutamine @ 5 mcg/kg/min
-- titrate to effect

b. If central pressures are low with low urine output
-- continue fluid resuscitation at increased rate

IV. After 24 Hours Post Burn

A. Serum Sodium and Potassium should be checked at least BID on the second burn day

B. Adjust type of fluid by the serum Sodium level

C. After 24 hours of crystalloid, if fluid requirements high, consider 5% albumin infusion (refer to SBCC)

D. Goal is to decrease IVF rate to one half of rate infused over the previous 16 hours

1. If patient > 30kg, urine output goal of ½ cc/kg/hour (max 50cc/hour)

2. If patient ≤ 30 kg, urine output goal of 1 cc/kg/hour