

CRUSH INJURY SYNDROME/ HYPERKALEMIA IN A DIALYSIS PATIENT (# 7102)

- **Routine Medical Care**
- **Trauma Patient Care** (see policy #7101)
- **Note:** Hypovolemia and hyperkalemia may occur, particularly with extended entrapment (usually > 4 hours). Once compression is released cellular toxins and potassium may be released into the body. Administering sodium bicarb alkalinizes the urine, controls hyperkalemia and acidosis.

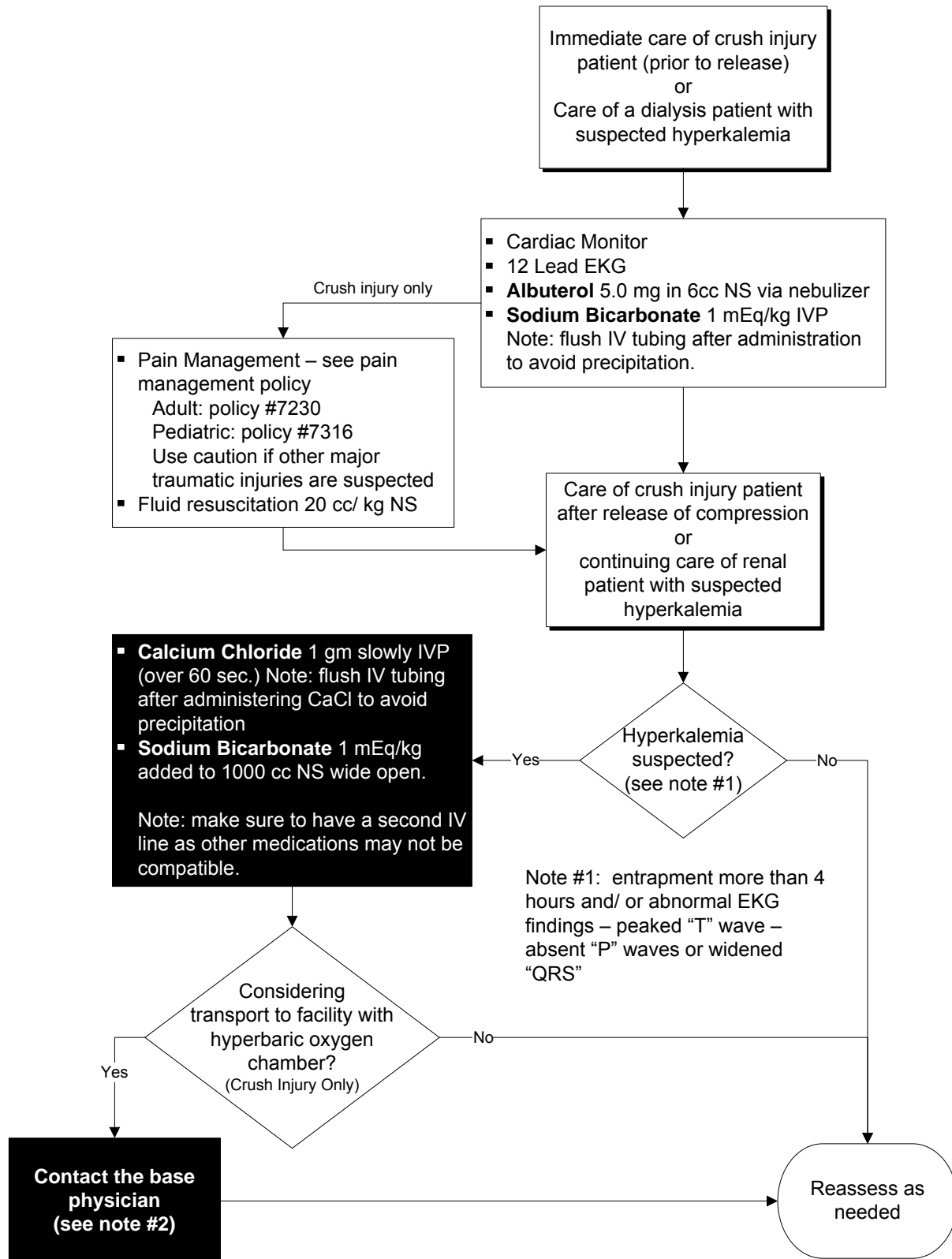
1. Crush Injury syndrome

Definition: Crush injury syndrome is the name given to the systemic manifestations of muscle crush injury and cell death. Crush injury syndrome should be suspected in patients with certain patterns of injury. Most patients in whom the syndrome develops have an extensive area of involvement such as a lower extremity and/or pelvis. It requires more involvement than just one hand or foot. The syndrome may develop after one hour in a severe crush situation, but usually requires 4 – 6 hours of compression for the processes that cause crush injury syndrome to occur.

2. Hyperkalemia in the context of dialysis

Definition: Hyperkalemia is common in patients with end-stage renal disease, and may result in serious electrocardiographic abnormalities. Dialysis is the definitive treatment of hyperkalemia in these patients. EKG findings are critical to proper treatment decisions. Findings such as peaked “T” waves and absent “P” waves as well as widening QRS complexes are signs that a renal patient in the context of dialysis is suffering from hyperkalemia. Renal patients who are taking ACE inhibitors, ARBs (aldosterone receptor blockers), NSAIDS, beta blockers and/ or sodium channel blockers have an increased risk of hyperkalemia in the context of dialysis. Obtain a thorough history paying special attention to the patient’s medications. In the periarrest dialysis patient, correcting hyperkalemia can be vital in the patient’s overall survival.

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Note #2: Area hospitals that have hyperbaric oxygen chambers are:

- Eden Medical Center – Castro Valley 889-5073 or 889-5015 (off hours)
- John Muir Medical Center – Walnut Creek (925) 947-3212
- Travis Air Force Base – Fairfield (707) 423-3987