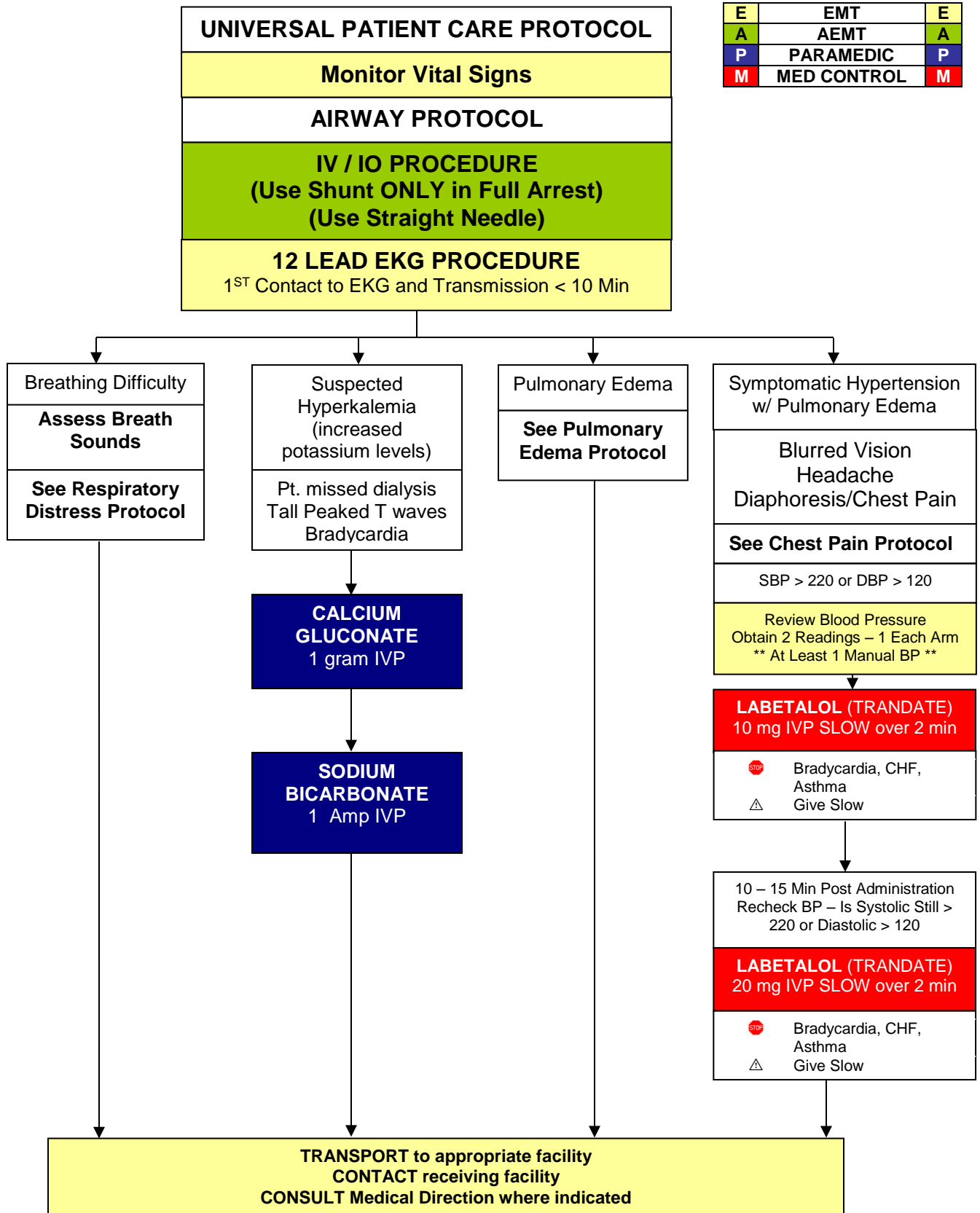




Section 5: Adult Medical Emergencies Protocol

ADULT MEDICAL EMERGENCIES: DIALYSIS / RENAL PATIENT

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Section 5: Adult Medical Emergencies Protocol

ADULT MEDICAL EMERGENCIES: DIALYSIS / RENAL PATIENT-Cont.

PEARLS and KEY POINTS

HISTORY	SIGNS AND SYMPTOMS	DIFFERENTIAL DIAGNOSIS
<ul style="list-style-type: none">• Renal failure• Dialysis treatment• Anemia• Dialysis treatment schedule• Previous implications• Long term catheter access• Shunt access• Hyperkalemia	<ul style="list-style-type: none">• Hypotension• Bleeding• Fever• Electrolyte imbalances• Nausea• Vomiting• Altered mental status• Seizure• Dysrhythmias	<ul style="list-style-type: none">• Congestive heart failure• Pericarditis• Diabetic problem

The chronic renal dialysis patient has numerous medical problems. The kidneys help maintain electrolyte balance, acid-base balance and rid the body of metabolic waste. Kidney failure results in a build-up of toxins within the body, which can cause many problems.

Dialysis is a process which filters out the toxins, excess fluids and restores electrolyte balance. The process may be done in two ways:

1. Peritoneal Dialysis

Toxins are absorbed by osmosis through a solution infused into the peritoneal cavity; and then drained out. The solution is placed into the abdomen by means of a catheter, which is placed below the navel. This process must be done frequently, as frequently as every 12 hours for a period of 1 - 2 hours.

2. Hemodialysis

Removes toxins by directly filtering the blood using equipment that functions like an electric Kidney, circulating the blood through a Shunt that is connected to a vein and an artery. This process usually needs to be done every 2 - 3 days for a period of 3 - 5 hours. A permanent shunt can be surgically formed as a fistula.

POSSIBLE COMPLICATIONS OF DIALYSIS TREATMENT

1. Hypotension (15-30%)
 - May result in angina, MI, dysrhythmia, altered mental status, and seizure
 2. Removal of therapeutic medications
 - Example: Tegretol
 3. Disequilibrium syndrome
 - Cause: shift of urea and / or electrolytes
 - Signs and symptoms: Nausea and / or vomiting, altered mentation, or seizure
 4. Bleeding
 - These patients are often treated with heparin and they may have a low platelet count
 - Bleeding may be at the catheter site, retro peritoneal, gastrointestinal, or subdural
 5. Equipment malfunctions
 - Possible air embolus
 - Possible fever or endotoxin
- Do not take blood pressure in arm that has the shunt. Use shunt for IV access ONLY if full arrest.
 - Access a dialysis shunt with a standard straight needle connected to IV tubing. IV catheters will be compressed by the wall of the shunt and will not flow correctly.
A dialysis patient may not respond to drug therapy. A renal patient in full cardiac arrest should be treated according to current ACLS guidelines.