

Urgent Renal Replacement Therapy (RRT) for Infants: Acute Initiation Checklist

December 24, 2003

Infant ICU Attending:

consults with Metabolic Diseases (in the case of suspected inborn error of metabolism) or Nephrology (in the case of life-threatening fluid and electrolyte complications or drug intoxication) and agrees with recommendation to begin urgent RRT. (For patient being transported to Children's likely to need RRT, the checklist below should be initiated prior to arrival.)

@ time zero:

instructs resident and nurse to send blood sample for type and cross immediately to Puget Sound Blood Center and to order two pedi-pacs of blood to prime the circuit(s), indicating the level of urgency required.

contacts on-call Nephrologist to arrange urgent RRT, to bring the appropriate selection of dialysis catheters, and to make a provisional decision between continuous RRT and intermittent hemodialysis.

informs IICU charge nurse of need for staffing of continuous RRT, when it is likely to begin if it will be proceeded by intermittent hemodialysis, and request move of patient to room B423 or B433 which have hemodialysis water access.

calls intravenous access physician to insert dialysis catheter: Options in order of preference:

- a) Interventional Cardiology attending (if in-house and readily available)
- b) Pediatric Surgery attending (or fellow if exceptionally experienced)
- c) PICU attending (or fellow if exceptionally experienced)
- d) Anesthesiology attending

invites other IICU attendings and fellows to participate in the management meetings and to provide in-house back-up as needed

@ 20-40 minutes:

meets with the Nephrology Attending to discuss initial RRT plan

@ 60-120 minutes:

meets with IICU team and nephrologist (see below)

Nephrology Attending:

@ time zero:

contacts dialysis nurse to implement CRRT/IHD urgently.

@10-20 minutes:

brings the appropriate selection of dialysis catheters to IICU

enters RRT pharmacy orders by CPOE.

@20-40 minutes:

meets with IICU resident, attending, and nurse to discuss initial RRT plan, including need for modifying current therapy with medications, fluids, and electrolytes

@ 60-120 minutes:

present in IICU to help with initiation of RRT

meets with IICU team (see below)

IICU nurse:

@ time zero:

moves patient to room with hemodialysis water access if necessary

gets orders from residents for new IV infusions to keep open dialysis catheter (usually ½ NS with 2 units heparin/mL at 2 mL/h) that must arrive by 60 minutes

@ 20-40 minutes:

meets with the Nephrology Attending and IICU team to discuss initial RRT plan

@60-120 minutes:

meets with IICU team (see below)

Dialysis nurse:

@ 10-60 minutes:

- arrives and begins to set up circuit with fluids and blood as it arrives.

@ 20-40 minutes:

- meets with the Nephrology Attending and ICU team to discuss initial RRT plan

@ 60-120 minutes:

- completes prime of circuit and is ready for intravascular access
- begins RRT
- meets with ICU team (see below)

Intravenous access physician:

@ 10-30 minutes:

- arrives and begins sterile insertion of dialysis catheter

@ 60 minutes (or by the time circuit is ready):

- completes insertion of dialysis catheter
- connects catheter ports to two heparin IV solutions

During first hour of CRRT:

- Nephrology attending, ICU medical and nursing teams, and Metabolic Disease attending** meet to discuss plans and to clarify roles and responsibilities, including drug dosing, expected changes in electrolytes and frequency of lab draws (including ammonia if relevant), total fluids, nutrition, blood pressure management, blood gases and ventilator management, sedation, etc.