Single Pass Albumin Dialysis (SPAD) in Pediatric Patients with Hyperbilirubinemia on CRRT. **Diane Gollhofer RN and Annelise N Ribeiro MD**

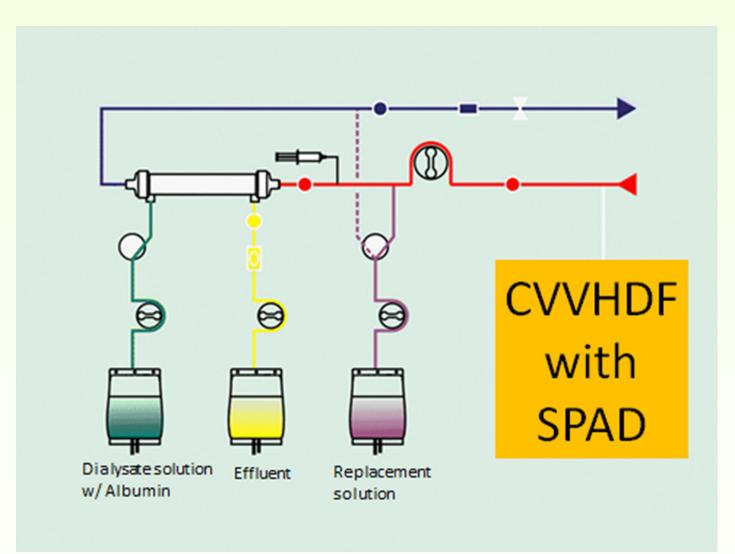
Background

Hyperbilirubinemia occurs in critically ill pediatric patients needing Continuous Renal Replacement Therapy (CRRT) in the ICU. The Molecular Adsorbent Recirculating System (MARS) dialysis has been described in patients with fulminant liver failure. However MARS is available in limited pediatric centers. There is little published data on using albumin in commercially available dialysate solutions for Single Pass Albumin Dialysis (SPAD). We describe the use of albumin as a dialysate additive in two pediatric patients with hyperbilirubinemia.

Methods

- Dialysate is delivered via a weight based CRRT machine (Gambro-Prismaflex). The dialysate bag weight is limited to 5L.
- Albumin was ordered as grams/dL, with pharmacy displacing the volume of dialysate with an equal volume of albumin.
- The bedside nurse weighed each bag of • dialysate/Albumin and removed any excess over 5 liters before placing the solution on the pump.

Methods







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Results

RESULTS	Patient A	Patient B
Age	12 years	3 days
Gender	Male	Male
Diagnosis	s/p BMT with	PPHN/ECMO
	Sepsis	
CRRT prior to SPAD	Yes	No
Total Bilirubin on	1.04 mg/dl	10.60 mg/dl
admission		
Total Bilirubin prior	20.22 mg/dl	44.10 mg/dl
to SPAD		
Total Bilirubin post	16.31 mg/dl	19.10 mg/dl
SPAD		
Hours on SPAD	136	36
CRRT post SPAD	Yes	Yes
Disposition	Withdrawal of care	Withdrawal of care

Conclusions

- Albumin is costly and in limited supply
- SPAD likely works best for short duration times
- Centers using a weight based system for CRRT may have problems with the added weight of albumin.
- Pharmacy resources may be limited.

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