Discussion

1. **What are the practical tips about priming in children and the strategies to prevent complications?**

   We usually calculate the estimated blood volume, if the extracorporeal blood volume exceeds 10% percent of blood volume then we do blood prime. We are doing blood prime If patient's weight is lower than 45 kg, and he is going to do HA330 simultaneously with PIRRT with adult blood line. Hypotension episodes may occur and is managed by intensivist.

2. **After how many sessions of HP you notice the changes of need for vasopressor?**

   Decrease on vasopressor dose usually seen after the second session.

3. **Do you use a particular anticoagulant for anticoagulation to perform blood purification with hemoperfusion and RRT?**

   Heparin, low molecular weight heparin (LMWH) and citrate can be used as anticoagulant.

4. **what blood flow range in children do you use?**

   We usually incorporate our blood flow rate according to the children weight, and because we are doing a simultaneous PIRRT, so we follow the blood flow rate for the PIRRT, for example, if you have child with less than 20kg, the blood flow rate would be around 30-75ml/mi, and if child is 20-40kg, the blood flow rate would be around 75-125ml/min. Another way to compute flow rate is to be around 3-5 ml/kg/min, because we usually do PIRRT, so we follow the blood flow rate for PIRRT.

Q&A

1. **Since dialysis/plasma perfusion is not available in all hospitals, how can we avoid fluid overload in severe dengue?**

   It's hard especially when this patient comes in with repeated shocks and just going into the critical phase. This patient is suffering from severe plasma leak so our PICU doctors have no resort but to resuscitate with plasma expanders.

2. **What is the role of hypoalbuminemia in deciding whether dengue patients will undergo**

hemoperfusion?

I think it's a bad combination if you have severe hypoalbuminemia in a patient just entering the critical phase. Some of the patients who have low albumin and almost on the 2nd day afebrile, we rarely give hemoperfusion.

3. **How many hours does she had used the cartridge?**

   We usually do isolated HP treatment first for 2 to 2.5 hours then we proceed with PIRRT without removing the HP cartridge （Dr. Rachelle）.

4. **Won't the inotropes (dobutamine, dopamine, etc) be removed from the patient's blood during the dialysis?**

   Like all the extracorporeal therapies (HD/HDF/HP/HF etc.), HP may have influence on inotropes, therefore, would recommend to adjust the dose according to the patient's status.

5. **In the 12 hrs, 7 hrs, 5 hrs PIRRT, how many hours was the ISOUF before the regular HD, and on the 12 hrs and 7 hrs dialysis, was the 2-2.5 hrs HPF included?**

   It would depend in the case, usually we do HP 1st that is around 2 to 2.5 hours then if the patient has borderline bp we start with isolated ultrafiltration especially for those with severe overload. If the patient is also acidotic, we also start clearance to help the inotropes work.

6. **Were low dose diuretics included in the treatment of the fluid overload of the dengue severe patients? or the hemoperfusion, alone, did all the trick?**

   During the severe plasma leak some of our intensivists would start with furosemide drip but there will come a time where in there is significant decrease in urine output, this is attribute to severe edema in the renal capsule.

7. **how do you calculate the exact % of fluid overload?**

   Calculation method: Fluid in minus fluid out divided by the admission weight.

8. **Any literature available, please?**

   http://www.jafron.com/uploadfile/2020/0731/20200731043659909.pdf

   http://www.jafron.com/uploadfile/2020/0731/20200731043639127.pdf

   http://www.jafron.com/uploadfile/2020/0731/20200731043549326.pdf

9. **What's your usual HP-HD prescription in patients with severe sepsis?**

   Usually use 2-3sessions of hemoperfusion treatment.

10. **Is there a risk for disequilibrium syndrome in hemoperfusion?**

I don't think you won't have disequilibrium syndrome during hemoperfusion.

11. **Patient underwent dialysis for 7 hrs. 2 hours of that is HP then 5 hrs ISOUF? Or we can do the 3-4 hrs ISOUF just to remove fluids then may do regular HD for 1-2 hrs to maintain electrolyte balance?**

    Yes, we do that, we interject regular clearance during the ultrafiltration so as to address the acidosis and electrolyte imbalance.

12. **With bites by snake or bee or spider at what time you start HP and how many sessions do you usually do?**

    The faster hemoperfusion is the better the effect. Usually advised to be within the first 6 hour from poisoning, and usually not to exceeds 24 hours from poisoning, with average of 3 sessions.

13. **I mean of course we have to consider the BP of the patient, is it not we can start Iso UF HD without the UF so we can address the overload after the HP? Then if the patient has BP we can slowly adjust the UF accordingly?**

    Yes, you can do that, for us we successively reassess and increase UF rate as patient tolerates.

14. **How do you adjust your prescription if the patient with severe sepsis has cerebral edema and want to maintain high serum sodium?**

    We usually take intravenous infusion of 10% concentrated sodium chloride to reduce brain edema and increase serum sodium concentration.

15. **Of course. In covid-19 I have used HA330 (but in adult), and the results was great. Have you used the cartridges in pediatrics COVID?**

    The doctor has no experience in pediatric covid-19.

For more details you can follow the whole webinar by this link:

https://youtu.be/C3q-OdIwNzo

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