Peer Review File

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Reviewer A

1. First, in the title the authors need to indicate the clinical research design of this study, i.e., a case series or a retrospective cohort study.

Response: We appreciate his/her advice. The title has been changed in the revised version.

2. Second, the abstract needs some revisions because it is not adequate. In the background, the authors only indicated the knowledge gaps but did not explain the clinical contributions of this study and why DFPP is also effective and safe for pediatric patients. In the methods, the authors need to describe the inclusion of subjects, the assessment of clinical characteristics, the measurements of efficacy and safety outcomes, and main statistical methods. In the results, please describe the medical conditions of the 10 cases. Detailed data on the safety outcomes are needed. The conclusion should have more detailed comments for the clinical implications of the findings.

Response: We appreciate his/her advice. The “Abstract” section has been revised according to his/her comments and highlighted in red in the revised version.

3. Third, in the introduction of the main text, the authors need to describe how they solve the limitation of DFPP “the excessive extracorporeal volume within plasma fractionators (up to 150 mL)” for pediatric patients and explain why the modified DFPP is potentially effective and safe. The authors need to indicate the clinical needs for the efficacy and safety data of DFPP in pediatric patients, with focusing the balance of risk and benefits.

Response: We appreciate his/her advice. Firstly, in the INTRODUCTION section of first draft, we had mentioned “limitations exist regarding the applicability of DFPP in children, due to the excessive extracorporeal volume within plasma fractionators (up to 150 mL)”, which to clarify the main reason why there are few reports on the use of DFPP in pediatric patients, although it is an effective apheresis method with higher clearance rate and less volume of supplemented plasma compared to PE. Secondly, we did not modified the procedure of DFPP. The main findings of this study included, first, DFPP was considered as an effective apheresis method for pediatric patients with antibody-mediated disorders, such as SLE, AAV, C3 glomerulopathy and ABOi renal transplantation due to the excellent clinical response of these patients and its efficient pathogenic antibody clearance; second, the procedure was feasible and safe in children weighing more than 20 kg. Except for lesser episodes of hypotension, other adverse effects and abnormal bleeding were not found in our patients. Thirdly, we added the need to evaluate the efficacy and safety of DFPP in pediatric patients according to his/her comments (Introduction, line 85-88, page 4).

4. Fourth, in the methodology of the main text, please clearly indicate the clinical research design, the assessment of clinical characteristics, and the measurements of efficacy and safety outcomes. In statistics, please explain why non-parameter test was used for before-after comparisons and how the descriptive statistics were performed.

Response: In the **Patient identification** section of first draft, we had mentioned the assessment of clinical characteristics of each group of patients (line 106-116, page 5-6) and the measurements of efficacy and safety outcomes (line 116-121, page 6). Moreover, we indicated the clinical research design in the **Patient identification** section of revised manuscript according to his/her comment (line 100-101, page 5).

In **statistics**, we are very sorry for this confusion. We described data as median and

quartile for continuous variables and frequency or percentage for categorical variables. And the reasons for comparing parameters pre- and post-DFPP treatment by non-reference test are as follows: For continuous variables, due to the small sample size and the uncertain distribution of these variables, Wilcoxon test of paired samples was used to make the results relatively reliable. For categorical variables, paired Chi-square test was used to evaluate the differences between before and after DFPP treatment. The sentences have been corrected in the “Statistical analysis” section and highlighted in red in the revised version according to his/her comment. Simultaneously, we have revised figure 4-6 and described data as median.

Reviewer B

1. I would like to congratulate the authors on this excellent study looping at the role of DFPP in certain immunological conditions as an aid to other traditional immunosuppressive therapy. I think the results are encouraging and a more powerful study with a bigger sample size is needed to validate these results.

Response: Firstly, thank you for your recognition. We quite agree with your point. This was a single-center uncontrolled, and retrospective study, and we examined only 10 patients. A large-scale multicenter clinical trial that compares various apheresis methods (such as DFPP *vs* PE) in pediatric patients is warranted to validate these results.