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Dr. Daniel Schwartz has asked me to comment on the publication of the MEPEX Study (Jayne et al JASN 18: 2180).

The study compares the ADDITION of either pulse methylprednisolone or plasma exchange to usual therapy of daily oral prednisone and cyclophosphamide in the treatment of ANCA-associated (but GBM-negative) vasculitis with advanced renal insufficiency, defined as serum creatinine > 500 umol/l.

The rationale for this study is not defined. A previous study by Pusey et al from 1991 suggested that plasma exchange could be of incremental benefit in the subset of patients presenting with vasculitis in whom there was significant renal insufficiency. However, this was a subgroup analysis of an overall negative study. So the current study was designed, I suppose, to hone in on those types of patients. However, the practical ramifications of comparing plasma exchange to pulse solumedrol is not obvious to me: why not just do both, ie, give plasma exchange and pulse steroid? I don't know why they didn't just design the study as the addition of plasma exchange or not. (Note their concluding sentence: "The role of intravenous methylprednisolone in addition to plasma exchange for this indication...requires further study.")

The study shows that there is more recovery of renal function in the group who received plasma exchange. Interestingly, this was manifest in the first 3 months, with no real change in outcome (renal failure or deaths) after that time. This is shown in panel A of Figure 2, where the difference is manifest at the 3 month point, with not much change after that. The flow chart of Figure 1 also shows that at 3 months there were equal deaths in both groups (substantial, actually, but an older cohort than previous literature) and double the ESRD in the methylpred group.

So what to "take home" from this study?

It does appear that plasma exchange offers a greater chance of recovery of renal function in patients presenting with severe renal impairment. Although this is a "pauci-immune" disease, the PLEX may work by physically removing ANCA themselves, suggested to be pathogenic in the disease, or removing mediators of the inflammation and damage. As I said above, I don't get the "either/or" of methylprednisolone, and its addition to PLEX could perhaps improve results even more.

Note that exclusion criteria included the patient being on dialysis for more than 2 weeks, and previous CKD before the vasculitis.

I think that I will be more prone to use PLEX in patients with severe renal failure and ANCA-associated vasculitis (even more so if they have pulmonary hemorrhage in any case). However, it is well to keep in mind that PLEX is not without risk, and, as with previous teaching, should not be used in "old" disease where the damage is likely fixed.

I welcome other comments.

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