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A) COMMENTS ON PUBLISHED ARTICLES

Dialysis hypotension and vasopressin

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Dear Editor,

With interest, we read the article by Beladi-Mousavi et al.[1] on the effect of intranasal DDAVP (Desmopressin) for the prevention of dialysis hypotension. The authors showed that, compared with placebo, intranasally administered DDAVP was associated with a significant decrease in the incidence of intradialytic hypotension episodes and higher postdialysis mean arterial blood pressures in 17 hypotension-prone patients. This observation adds evidence to the efficacy of vasopressin analogues for the prevention of dialysis hypotension following the study of Lindberg et al. showing that intranasal lysine-vasopressin increased intradialytic blood pressure in 6 patients with refractory dialysis hypotension.[2] However, in our opinion, important questions should be answered before intranasal vasopressin analogues can be recommended for the prevention of dialysis hypotension. First, the optimal timing and dosage of intranasal Desmopressin and vasopressin administration must be determined. Therefore, it is important to know which dosage of DDAVP spray (2 puffs) Beladi-Mousavi et al. exactly used in their study. Second, the safety of repetitive intranasal administration of vasopressin analogues should be studied. Did Beladi-Mousavi et al. observe side effects of DDAVP treatment? Finally, future studies should compare the efficacy and safety profile of this treatment with other established measures for the prevention of dialysis hypotension, like cold dialysate and Midrodrine administration.

We have some methodological comments on the study by Beladi-Mousavi et al. The authors did not state whether the placebo nasal spray (distilled water) was indistinguishable from the intranasal DDAVP spray. This is relevant to ensure that this was indeed a double-blind study, especially since all patients were first treated with placebo and then with intranasal DDAVP. Beladi-Mousavi et al. used a rather liberal definition of dialysis hypotension: a fall in systolic blood pressure >10mmHg. Although there is no standardized definition of intradialytic hypotension, recent guidelines propose a more strict definition: a decrease in systolic blood pressure ≥20mmHg or a decrease in MAP by 10mmHg in combination with a clinical event and the need for a nursing intervention.[3]

Notably, there are alternative vasopressin-related measures for the prevention of dialysis hypotension. Recently, we showed that hemodialysis with the biofeedback system Hemocontrol is associated with a significant increase of plasma vasopressin levels, whereas vasopressin levels did not change during conventional hemodialysis.[4] Hemocontrol is a technique in which ultrafiltration rate and dialysate conductivity are continuously adjusted in response to blood volume changes. The augmented vasopressin release early during Hemocontrol hemodialysis is likely caused by a higher initial plasma sodium concentration and ultrafiltration rate.

Conflict of interest

The authors declare that there is no conflict of interest associated with this manuscript.

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Immunosuppressive treatment of lupus nephritis in severe renal impairment. About the ALMS study

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To the Editor:

Regarding the Consensus Document published in this magazine last February on the diagnosis and treatment of lupus nephritis (LN)[1], I want to congratulate the group for such exquisite work, from which we hope to optimise treatment of patients with this pathology. From reading this piece two thoughts emerged:

1. Houssiau[2] refers, in an editorial accompanying the ALMS[3] study release, that among patients who received maintenance therapy with mycophenolate (MMF), the ones who had previously received cyclophosphamide (CYC) induction obtained better results on the main variable outcome of the maintenance phase (11 vs. 21% in death, doubling of baseline creatinine, advan-

ced chronic kidney disease, renal flare or salvage therapy), but with no significant differences. This is also a subgroup analysis, which binds us to be cautious of interpretations. Another subgroup analysis, with the same cautious interpretation[3], emphasizes that patients receiving CYC induction did significantly better with MMF compared to azathioprine (AZT) in maintenance (4.7 vs. 14.5 in relative risk of treatment failure). Along the same lines, though without achieving statistical significance, subjects who received MMF induction also presented better results with MMF than with AZT (relative risk 10.1 vs. 20.1 on treatment failure). On the American Nephrology Congress (November 2011, Philadelphia, USA) Appel GB mentioned, regarding the ALMS study, that "patients who were treated with CYC induction presented less treatment failure on the maintenance phase than patients treated with MMF, independently from the drug received on this second phase". I believe this is the part you mentioned on the Consensus Document. This statement would make us conclude that CYC induction adds an additional benefit regardless the immunosuppressive maintenance option. This a theme to be debated, although it can be subject to future research, and we should examine it with discretion given that it originated from a subgroup analysis.

2. There are few studies on the best immunosuppression in patients with LN and renal clearance (ClCr) <30ml/min, probably because reference studies with CYC excluded patients that presented stage 4 renal failure (RF), except for some involving a patient with creatinine of 4.8mg/dl[4] with not many details and no results subanalysis. Even so, we have relied on the suitability of CYC in patients with severe LN and RF, and thus have been captured in the Consensus Document.

The ALMS study[5] rated with a 4-5 score on the Jadad scale, included a total of 32 patients (8.7%) with ClCr <30ml/min, 20 (10.8%) in the MMF branch and 12 (6.5%) on CYC. In the total group of 370 patients, 122 had scarring on renal biopsy, 66 (35.7%) on the MMF branch and 56 (30%) on the CYC branch. Regardless the data, no differences were found between both groups in the main variable results, which measured the efficacy of immunosuppressive treatment in inducing response. Based on this data, every day more of us begin induction treatment for LN class III-IV-V still with stage 4 RF with MMF and especially if the patients are women in their childbearing years. Besides, this kind of patients are treated with steroid pulses, which will act more rapidly and effectively in reducing the acute inflammation in the renal parenchyma, awaiting the additional benefit and hoping that they would add the non-steroid immunosuppressants.

If we continue to recommend CYC in patients with creatinine >3mg/dl (or with crescents/fibrinoid necrosis on biopsy), I believe that we will be depriving them from the opportunity of treatment with a drug free of gonadal toxicity and preventing the possibility of obtaining evidence with MMF on cases of important reduction of glomerular filtration rate, as long as it is a individualized responsible decision.

Conflict of interest
The authors declare that there is no conflict of interest associated with this manuscript.

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B) BRIEF PAPERS ON RESEARCH AND CLINICAL EXPERIMENTS

On-Line haemodialfiltration versus high flux haemodialysis

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To the Editor:
The influence of convective techniques on the evolution of the dialysed patient's anaemia is controversial when compared with haemodialysis performed with high flux membrane and ultrapure bath. In many studies short-term benefits could not be found.[1] It is possible that the effect of convective technique on anaemia may require a longer development time. To analyse