Reviewer’s report

Title: The improvement of QRS-T angle as a manifestation of reverse electrical remodeling following renal transplantation in end-stage kidney disease patients on haemodialysis

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Reviewer: Ciro Esposito

Reviewer's report:

In this study, Jaroszynski and Colleagues aimed to check whether renal transplantation (RT) could reduce the widening of QRS-T angle, a strong predictor of heart structural and electrical remodeling. 54 patients, undergoing RT were included; ECG with derived vectorcardiogram and echocardiography were performed at 1 week, 3 months, 6 months, 1 year and 3 years after RT. A reduction in QRS-T angle was documented which correlated with some echocardiographic parameters.

MAJOR COMMENTS

The study by Jaroszynski and Colleagues is quite interesting, enlightening the potential usefulness of an easy to obtain parameter to assess cardiac muscle remodeling in transplanted patients. However, there are some pitfalls that need to be pointed out.

- First of all, it is mentioned in Methods section that QRS-T angle was evaluated in 60 controls, with gender distribution and age range similar to the group of patients. However, no other information is given about this control group. What were the baseline characteristics of the controls? What was the mean value of QRS-T angle in this group and was it different from the patients group? Did they undergo the same follow-up? These points need to be clarified before considering the manuscript for publishing.

- No data are given about the pharmacological treatment of patients during the follow-up. Data about the therapy are shown only for the period prior RT. In the analysis shown in Table 5 beta blockers were considered: is it reffered to a therapy instituted after RT or before (in this case, was it continued during the whole folloe-up)? As treatment such as beta blockers, ACE inhibitors and aldosterone receptors antagonists can have a strong impact on cardiac remodeling, treatment history should be detailed.

- Patients' data such as ECG, electrolytes and blood pressure should have been obtained even before renal transplantation, as changes in those parameters could have been happened even 1 week after transplantation.
MINOR COMMENTS

- Methods: "unstable graft function" should be defined.

- What was dialysis vintage of patients? As a longer time on dialysis could influence negatively cardiac remodeling, it would be interesting to check if there were differences in the study outcome according to different dialysis vintage.

- In Results, it is stated that an abnormal QRS-T angle was found only in 18.5% of patients. The mean baseline value, according to Figure 1, was 88.3±16.2°, which is not far from the mean of a healthy population, according to other published reports. Please discuss, also clarifying the abnormality cutoff in the introduction (was it considered different for men and women?).

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