Author`s Reply

To the Editor,

We would like to thank the authors for their comments and contributions towards our original research entitled "Assessment of the relationship between the fragmented QRS and cardiac iron overload in Patients with beta-thalassemia major" that was published in the February 2015 issue of the Anatol J Cardiol (1). As known, cardiac T2* values measured by cardiac MRI are used for the follow-up of cardiac iron overload in thalassemia major (TM) patients. In our study, 102 patients with TM using the same iron chelators for the last 2 years were enrolled. A significant relationship was found between the cardiac T2* values and the presence of the fragmented QRS complex on the surface electrocardiogram.

Although this was not the primary purpose of our study, the differences with respect to the T2* values and fragmented QRS presence were also assessed according to the use of iron chelators in the subgroup analysis. Thus, as noted by the authors, the univariate analysis in patients treated with deferasirox (OR=0.38; 95% CI 0.17–0.87, p=0.021) were lower than that in patients using deferoxamine (OR=2.73, 95% CI 1.2–6.14, p=0.015) for cardiac involvement. Similarly, cardiac involvement was detected in 56% of the patients using deferoxamine and 30% of deferasirox users (p<0.005). Consistent with these findings, the presence of fragmented QRS was found in 60% of deferoxamine users and 24% of deferasirox users (p<0.001). In the univariate analysis, we found that a less frequent presence of fragmented QRS was observed in deferasirox users; there was no significant association with the use of deferoxamine. In the light of these results, it can be thought that in patients with TM using deferasirox, cardiac involvement and the presence of fragmented QRS are less common. However, in our study, the recent T2* values at the time when the patients' electrocardiogram was taken were used. We have no datum of baseline T2* values before the start of the iron chelator regime used by the patients. Therefore, the limited number of our patients in each treatment group as well, both

because of the lack of our baseline T2* values, due to based on our study sub-analysis may not be appropriate to say that the more efficient use of deferasirox therapy.

In the literature, there are studies that have found more effective iron chelators that are available for use in TM patients. In a research conducted by Pather et al. (2), a significant increase of T2* values in deferasirox users was reported in a 18-month follow-up for 19 patients with cardiac iron loading and T2* values of 6–20 ms. Similarly, in the study by Pennel et al. (3), an increase in T2* values were detected with deferasirox in the 3-year follow-up of 71 patients with T2* values of 5–20 ms. In the CORDELIA study that compared the deferoxamine treatment with deferasirox, in deferasirox group, also not reach statistical significance, better results in myocardial iron removal was determined (4). Also, in the study conducted by Pepe et al. (5), the difference between the baseline and follow-up T2* values of 164 TM patients was investigated to study the effectiveness of the iron chelators that were used. According to this research, initially in patients with non-iron load combined treatment with deferiprone+deferoxamine were similar with the use of each drug as monotherapy in terms of the maintenance of normal T2* values. However, in this group of patients, deferiprone monotherapy was found to be superior to monotherapy with deferoxamine and combination therapy in the maintenance of normal left ventricular ejection function. Initially, in patients with iron overload, with respect to the elevation of T2* values, combination therapy has been reported to be similar with deferiprone treatment but superior to treatment with deferoxamine (5). Therefore, knowledge of baseline T2* values are important in the evaluation of drug efficacy. Currently, ongoing large-scale studies will guide our treatment selection.

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