Author's response to reviews

Title: Premature ventricular contractions originating from the left ventricular septum: Results of Radiofrequency catheter ablation in twenty patients

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Author's response to reviews:

Dear Editor:

Thank you for your kind letter of March 18, 2011. We have revised the entire manuscript entitled “Premature ventricular contractions originating from the left ventricular septum: Results of Radiofrequency catheter ablation in twenty patients” (MS: 1173485413510711) from start to finish in accordance with the reviewers’ and editorial comments. We acknowledge your help and the reviewers’ comments and constructive suggestions very much, which are very valuable in improving the quality of our manuscript.

Here below is our description on revision according to the comments.

Reviewer 1
1. The reviewer’s comment: Page 6 (line 12 )-symbol \\ -typographical error.
The authors’ Answer: Corrected accordingly.

2. The reviewer’s comment: Page 15 (table 2)- abbreviation RMB needs to be described.
The authors’ Answer: Done accordingly. RMB#Ren Min Bi or China Yuan (China's Currency).

Reviewer 2
1. The reviewer’s comment: Given that ablations performed on these patients were done using a mapping system, it would be nice to see a compiled 3D map of successful ablation points.
The authors’ Answer:
We agree with the reviewer that it would be nice to see a compiled 3D map of successful ablation points. However, the mapping techniques in our study were basically the same as those described in previous studies (Tada H, et al. Heart Rhythm 2007, 4: 7-16; Huang CX, et al. Pacing Clin Electrophysiol 2006, 29:343–350; Takemoto M, et al. J Am Coll Cardiol 2005, 45: 1259–1265), which included pace mapping and activation mapping without 3D mapping technique.

2. The reviewer's comment: How many lesions were applied in each patient prior to success?

The authors' Answer: The results have been added into the revised manuscript (Table 1-2). RF lesions prior to success were 3.8±1.4 in total, 3.3±1.3 in the anterosuperior group and 4.3±1.4 in the posteroinferior group, respectively. No differences in RF lesions were found between the anterosuperior group and posteroinferior group.

3. The reviewer's comment: In patients with minimal PVC burden and therefore limited mapping capabilities were any empirical lesions i.e lines drawn as in a presumed fascicular VT ablation?

The authors' Answer: The strategy in the study was that a careful search was firstly performed for Purkinje potentials preceding the onset of QRS during sinus rhythm along the left ventricular septum in all patients, and radiofrequency energy was delivered at sites demonstrating local endocardial recording with earliest presystolic Purkinje potentials in sinus rhythm if there was insufficient ectopy to permit activation mapping. The ablation at earliest presystolic Purkinje potential site was unsuccessful in all patients with PVCs from the left ventricular septum in the present study. All patients with presumed fascicular VT were firstly based on Purkinje potentials to ablate with discrete ablation and without linear ablation.

4. The reviewer's comment: Where calcium channel blockers attempted in any of these patients given that the presumption is that of an automatic focus?

The authors' Answer: In this study, sustained ventricular tachycardia was not inducible by electrical stimulation and isoproterenol infusion in all 20 patients, ventricular parasystole was often observed, ablation at the site recording the earliest Purkinje potential was not effective in all 20 patients, and Purkinje potentials were not identified at successful sites during point mapping. These suggest enhanced automaticity, but not reentry as the most likely mechanism of PVCs originating from the left ventricular septum in the study.

In the present study, verapamil were used in only 6 of 20 patients with PVCs from the left ventricular septum, and were not effective for the patients.

5. The reviewer's comment: Based on ECG criteria, the features of "septal PVCs" are similar to that of a fascicular origin, but is unclear the number of patients in whom the origin was determined to be septal and myocardial in origin vs the number that were fascicular in nature from the total of 318 patients that referred for PVC ablation. Could you please clarify this?

The authors’ Answer: According to the comment of the reviewer, the data have
been added into the revised manuscript. PVCs in 8 of 318 patients originated from fascicles.

6. The reviewer’s comment: What number of these patients had attempted ablations at sites of mapped Purkinje potentials prior to mapping to alternative sites? i.e definitively excluding the fasicles vs. ablating at a site that is still fasicular in nature but no obvious Purkinje potential was identified.

The authors’ Answer: ALL 20 of 318 patients in the present study firstly attempted ablations at sites of mapped Purkinje potentials prior to mapping to alternative sites.

Editorial comments:
1) Authors’ contributions: Please include an Authors’ contributions section before the Acknowledgements and Reference list.

The authors’ Answer: The Authors’ contributions section has been added to in the revised manuscript.

2) Ethics/consent

The authors’ Answer: Ethical approval was obtained from the Ethics Committee of the Second Affiliated Hospital of Wenzhou Medical College, and all patients gave informed consent before participation in the study. We have added a paragraph in the methods section stating this.

3) Competing interests

The authors’ Answer: The authors declare that they have no competing interests. The section including Competing interests has been added to the revised manuscript.

The manuscript has been also revised to conform to the style and format guidelines of the journal.

Thank you and all the reviewers for the kind advice.

Sincerely yours,
Li Yue-chun
2011.4.15