Author's response to reviews

Title: Personalized Medicine, Genetics, and Atrial Fibrillation: Will it ever happen?

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Author's response to reviews: see over
Integrating recent discoveries with previous insights about atrial remodeling and AF pathophysiology has led to resurgence of interest in exploiting biological pathways with pharmaceuticals for AF management [16, 17].

We have added a table listing genes and loci implicated in AF susceptibility and have added the following statement to the second paragraph: Mutations in sodium, potassium, and calcium channel subunits, as well as in gap junction and non-ion channel proteins have been reported and are reviewed elsewhere (Table 1) [8, 11].

Furthermore, although a widespread heritable component underlies AF, the arrhythmia may result from a variety of different pathological processes. Whether genetic profiling will successfully predict incident AF may depend on the extent to which the “type” of AF studied is influenced by genetic factors. The importance of refining AF classification has been highlighted elsewhere,[55, 56] and may overcome the potential challenges that phenotypic heterogeneity presents to risk prediction efforts.
Reviewer: Larissa Fabritz

1) Table: The table lists area, example, potential utility and limitations and may still profit from a short summarized information section on the actual genetic knowledge today, e.g. a summary of hitherto identified genetic risk factors AF or clinical examples.

   Good point. In keeping with point #2 raised by Dr. Dobrev above, we have added a table listing genes and loci implicated in AF susceptibility and have added the following statement to the second paragraph: Mutations in sodium, potassium, and calcium channel subunits, as well as in gap junction and non-ion channel proteins have been reported and are reviewed elsewhere (Table 1) [8, 11].

2) Title: Personalized medicine is already attempted in atrial fibrillation patients as authors point out themselves, so maybe clinical use of genetic evidence or alike is rather what this review is about?

   We have revised the title to: “Personalized Medicine, Genetics, and Atrial Fibrillation: Will it ever happen?”

3) Introduction: It is increased risk of death or rather increased risk of premature death?

   Given any confusion that could arise with this phrasing, we have revised the wording of the sentence to be more precise: “…well as increased risks of thromboembolic stroke, heart failure, and mortality.”

4) References: Concerning ref 53 and 54. Should these company websites should actually be quoted in this journal?

   We have removed these references and cited the companies by name in the text.