Reviewer's report

Title: Non-invasive evaluation of ventricular refractoriness and its dispersion during ventricular fibrillation in patients with implantable cardioverter defibrillator

Version: 1  Date: 18 April 2004

Reviewer: Pascal van Dessel

Reviewer's report:

General
This paper presents a non-invasive method of estimating local temporal dispersion in refractoriness by means of measuring VF intervals during induced VF. Also spatial dispersion in refractoriness is expressed as the difference between these measures obtained from RV apex and LV posterior wall.

The authors choose the 10th percentile of VF intervals as the actual dispersion measurement because they consider this the shortest interval that can be measured reliably. Unfortunately, a 'gold standard' is missing. Since a 'golden standard' is missing it would have been very interesting to know if the estimation of dispersion obtained in this manner is e.g. less in patients with less damaged hearts such as in patients with a prophylactic ICD implantation. Comparison of this parameter in different populations would make it easier to appreciate the exact magnitude of this parameter.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1) What was the correlation measured between VERPs measured during SR in RVOT and RV apex and the median, mean, shortest and 10th percentile of VF intervals?

2) Parts of recordings in which the local activation could not be indicated were omitted from analysis. How often did this happen?? Was this especially when very short VF intervals were present?

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Some english grammatical corrections are in order

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Discretionary Revisions (which the author can choose to ignore)

1) Are data in patients with prophylactic ICD implantation (e.g. Brugada syndrome) available?

What next?: Accept after minor essential revisions

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No
Declaration of competing interests:
None