Diagnostic yield and outcomes of systematic work-up of aborted sudden cardiac death victims and their relatives

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Topic(s):
Ventricular Arrhythmias and SCD - Epidemiology, Prognosis, Outcome

Citation:
Introduction: Cardiac arrest can be the first manifestation of most inherited cardiac diseases. This motivates the international guidelines recommending screening of relatives of cardiac arrest survivors (aSCD) if an inherited cardiac disorder might have caused the cardiac arrest.

Purpose: To assess the presence of inheritable cardiac diseases in cardiac arrest survivors and their relatives.

Methods: In this retrospective study we consecutively included cardiac arrest survivors (probands) and their relatives referred to our tertiary referral center from 2005 to 2018. All probands and relatives underwent a systematic screening protocol. Data were retrieved from medical files. Only probands with non-ischemic heart disease were included.

Results: We included 155 probands (41±16 years old, 94 (61%) male) and 284 relatives (36±19 years old, 144 (51%) male). We identified an inheritable cardiac disease in 70 (45%) probands, most frequently cardiomyopathies (41, 26%) followed by channelopathies (27, 17%) (figure). A borderline diagnosis was found in 32 (21%) probands. In the relatives, an inheritable diagnosis was identified in 38 (13%) individuals, most frequently channelopathies (23, 8%), and a borderline diagnosis was identified in 33 (12%) individuals.

Conclusion: Clinical assessment of aSCD cases on a non-ischemic basis identified an inheritable cardiac disease as the most likely etiology in almost half of the probands and in 13% of the relatives.
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Figure: Diagnostic findings in cardiac arrest survivors (A) and relatives (B), specified in number of individuals.