Reviewer's report

Title: Metabolic Syndrome is associated with a poor outcome in patients affected by Outflow tract Premature Ventricular Contractions treated by Catheter Ablation

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Reviewer: Francesco Cipollone

Reviewer's report:

The manuscript by Sardu and colleagues is an interesting research article aimed to investigate the impact of metabolic syndrome (MS) on the outcome of catheter ablation for treatment of premature ventricular beats. The authors have enrolled 90 patients treated with catheter ablation that were divided in two groups according the presence or absence of MS. The main outcome evaluated was the occurrence of ventricular arrhythmia recurrence evaluated in ECG-Holter monitoring during the follow-up (mean follow-up 35 months). The authors have found an increase in the recurrence of outflow tract premature ventricular beats in patients with MS. Interestingly, the authors have performed a Cox regression analysis showing that only MS was an independent predictor of the study outcome in their population.

The study is well designed and the results are of clinical interest, as they suggest a role for MS (and obesity) in the pathogenesis of ventricular arrhythmias. This is in line with the evidence that obesity is associated with an increase of sudden cardiac deaths also before the development of heart disease (see also ref. 20 and 21 of the manuscript). An interesting feature of the study is the enrolment of a large population from three different hospitals without evidence of structural heart disease, thus excluding a potential important bias. Furthermore, the accurate and rigorous statistical approach used allowed the exclusion of other confounding factors. In particular, the authors have found that MS, C-reactive protein, and procedural time were associated with recurrence of ventricular premature beats in univariate analysis, whereas the MS was the only one to be independently associated with the outcome in multivariate analysis.

Discretionary revisions:

1. The manuscript is well written. Anyway, some typos to be fixed are present (i.e. page 9, l. 2: “(HR=9.655 , 95% CI= 3.000-31.0.68 , p<0.001)” should be “(HR=9.655 , 95% CI= 3.000-31.068 , p<0.001)”; page 8 “ARS blockers” should be “ARB”...)

Level of interest: An exceptional article

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I have no competing interests to disclose