

HOW TO PREDICT COMPLICATIONS IN PATIENTS SUBMITTED TO VENTRICULAR TACHYCARDIA ABLATION - IT IS PAINESD RISK SCORE USEFUL?

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Introduction

- **Sustained monomorphic ventricular tachycardia (VT)** is associated with an increased risk of mortality and morbidity in patients (pts) with ischemic heart disease (IHD).
- Several **risk factors** for complications and mortality following ventricular tachycardia (VT) ablation have been described.
- **PAINESD risk score** (chronic Obstructive Pulmonary Disease, Age > 60 Years, Ischemic Cardiomyopathy, NYHA functional class III or IV, Ejection fraction <25%, presentation With VT Storm, Diabetes Mellitus) is **validated for acute decompensation during catheter ablation of VT**.
- There is any score to predict mortality and complications in these pts.

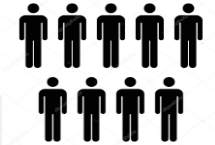
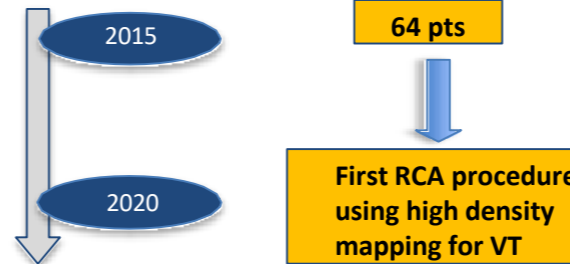
Purpose

- To evaluate **PAINESD risk score** as a predictor of mortality and complications in a population submitted to VT ablation.

Methods

- **Prospective single-center observational study**  **June 2015 to June 2020**
- **Population:** pts with IHD, referred for Radiofrequency catheter ablation (RCA) procedure for VT using high-density mapping catheters.
- The **PAINESD mortality risk score** after VT ablation was determined to:
 - estimate the predicted outcome in this population;
 - evaluate its accuracy in our population.
- **Statistical analysis:** variables selected from the univariate analyses ($p \leq 0.10$) were entered into multivariable Cox proportional hazards regression models to estimate predictors of ICD shocks recurrence and overall mortality.
- All analyses were 2-sided and a **P-value <0.05** was considered statistically significant.

Results



- **Sex:** 95% male
- **Age:** 68±9 years
- **Follow-up duration:** 25±18 months.

- 83% of patients were in **NYHA functional class II or I**
- **Mean LV ejection fraction** was **33±11%**.

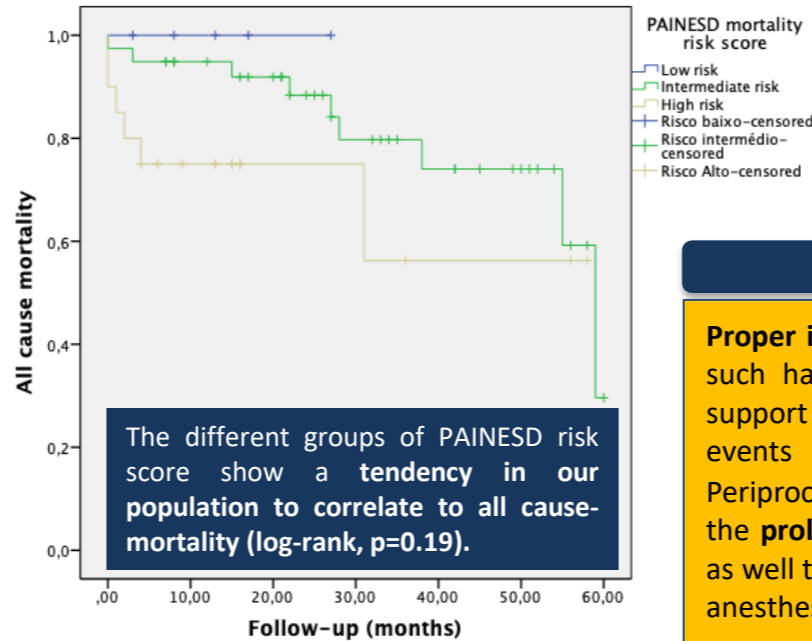
The baseline PAINESD risk score was **14±6** and **60.9%** were at **intermediate risk of acute hemodynamic**

Complications are a major concern in RCA of VT in IHD pts.

8 pts (12.5%)

Death: 2 pts (3.1%) (advanced heart failure died within 48 hours after the procedure)

The PAINESD risk score **was not able to predict complications** in our population ($p=0.42$).



Conclusion

Proper identification of patients at higher risk using appropriate scores such as the **PAINESD risk score** and prophylactic mechanical heart support may be valuable to reduce the risk of post-procedural adverse events

Periprocedural acute hemodynamic decompensation may be related to the **prolonged low-output state related do VT induction and mapping**, as well to **volume overload** due to irrigated catheter ablation and general anesthesia and is associated with an **increased risk of mortality**.