SYNCOPE IN PRIMARY PREVENTION ICD IMPLANTATION

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Disclosures

- none

Background

- Syncope may be the final common symptom for a number of clinical conditions spanning from benign conditions to life threatening diseases.
- Its prognosis varies widely and 1-year mortality may range from 0% in the case of vasovagal events up to 30% in the presence of heart disease.
- The significance of syncope in patients who are candidates for ICD implantation for primary prevention of SCD is unclear
- Primary or Secondary Prevention???

AIM

The aim of this study is to assess the outcome and prognosis of patients who underwent ICD implantation for primary prevention of SCD and compare patients that presented with or without prior syncope.

Methods

- We reviewed charts of 155 patients that underwent ICD implantation for primary prevention of SCD.
- We compared patients with history of syncope (75pts.) to a non matched control group of 80 patients without prior syncope.
- Follow up: mean 30 months
- We assessed the number of Ventricular Tachycardia , Ventricular Fibrillation, Shock, Antitachycardia Pacing and Death in each group during follow up.

Results

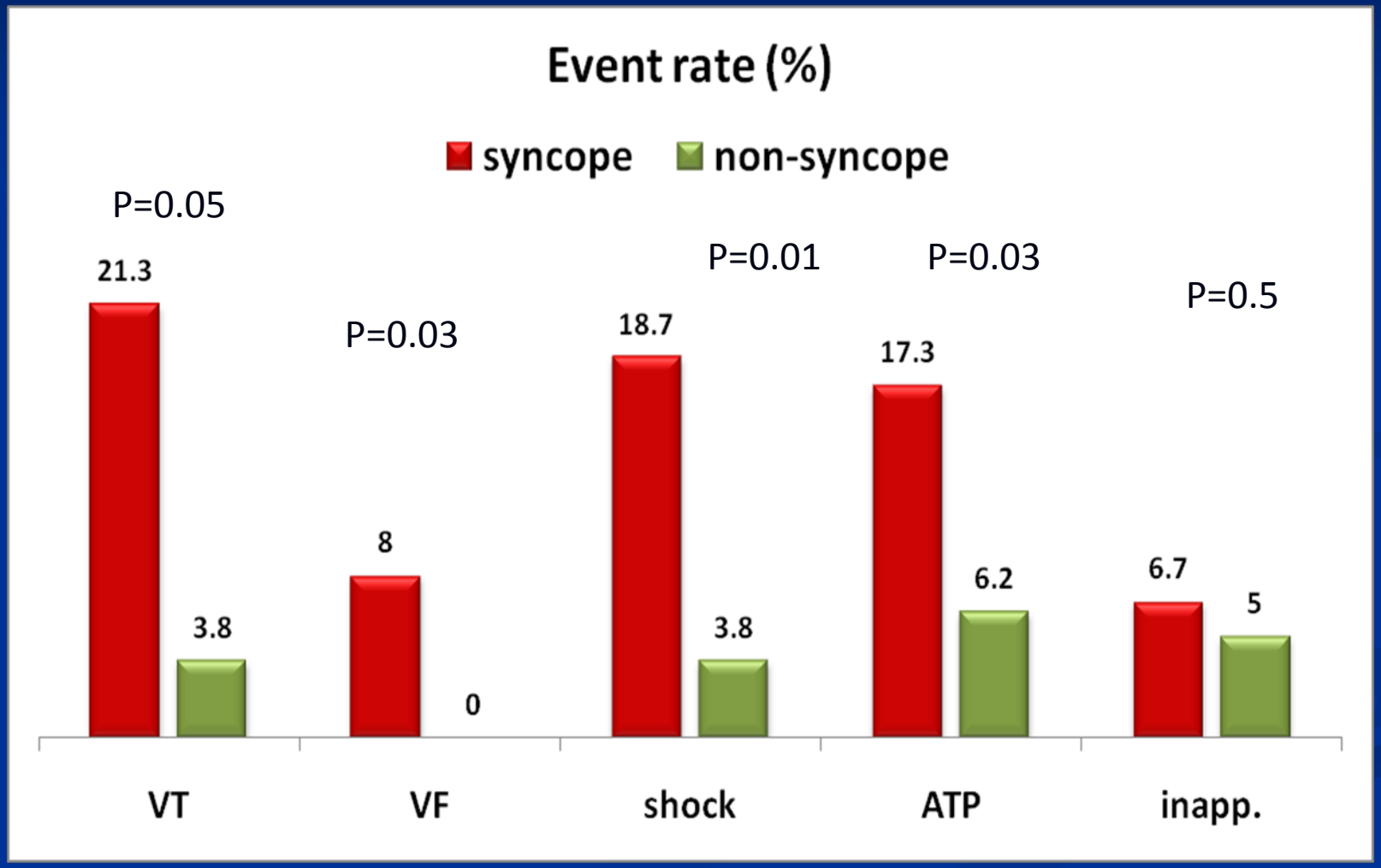
Baseline Characteristics

	Syncope(75)	No syncope(80)	p
AGE	65.0±13.4	68.9±11.7	0.058
Men %	77.3	86.3	0.210
Hypertension %	60	67.5	0.403
Diabetes Mellitus %	36	47.5	0.193
Dyslipidemia %	61.3	68.8	0.4
Renal Failure %	14.7	2.5	0.008
AF %	14.7	33.8	0.008

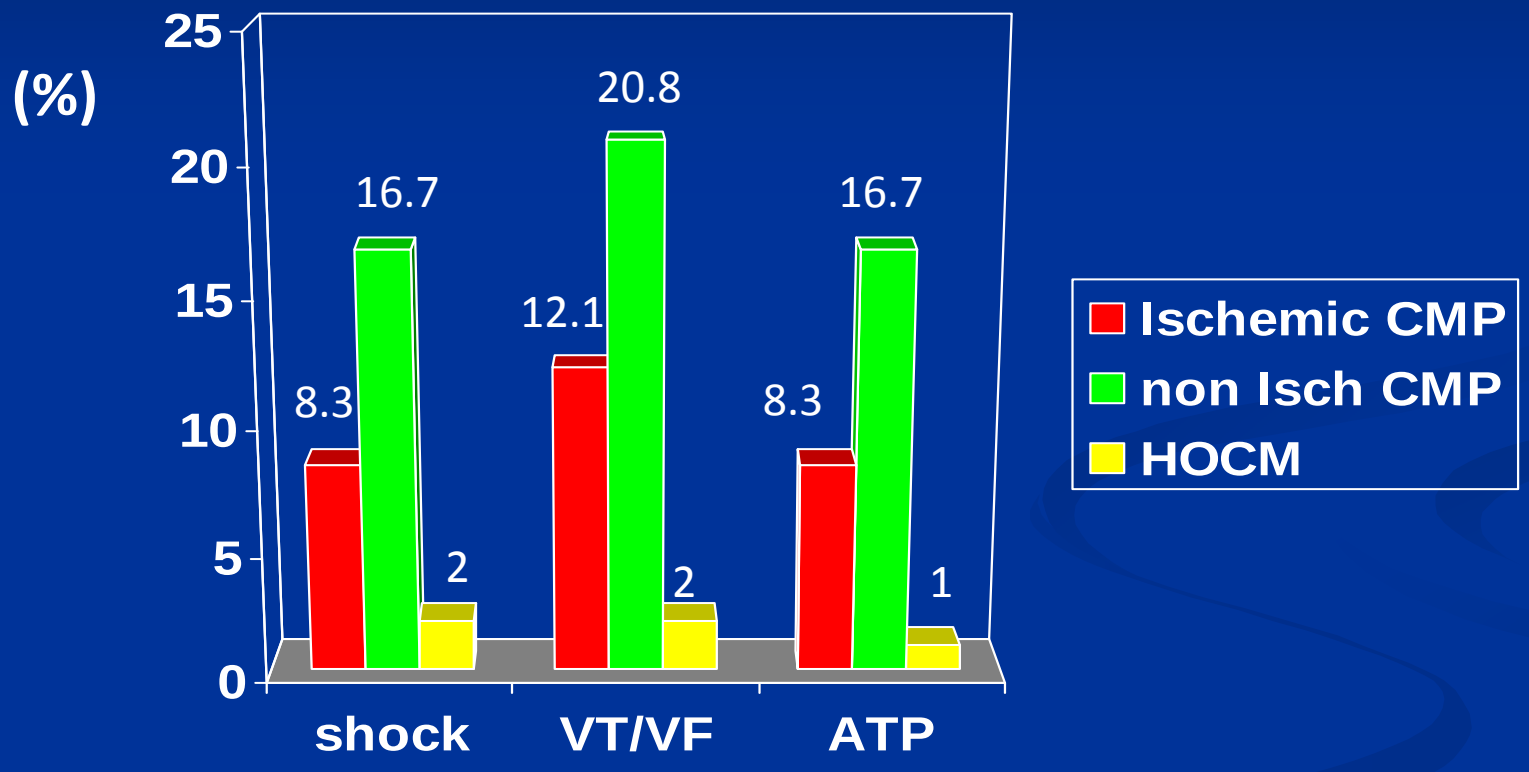
Baseline Characteristics

	Syncope(75)	No syncope(80)	p
Ischemic CMP	40 (30)	67.7(54)	0.001
Non Ischemic CMP	40(30)	22.5(18)	0.024
HCM	18.7(14)	7.5(6)	0.054
EF	35.5±12.6	31.4±8.76	0.02
ACEI/ARB	66.7	78.8	0.105
BB	72	92	0.01
SPIRONOLACTONE	26.7	41.3	0.06
AMIODARONE	24	16.3	0.2
CLASS 1 AAD	9.3	1.3	0.03

Results

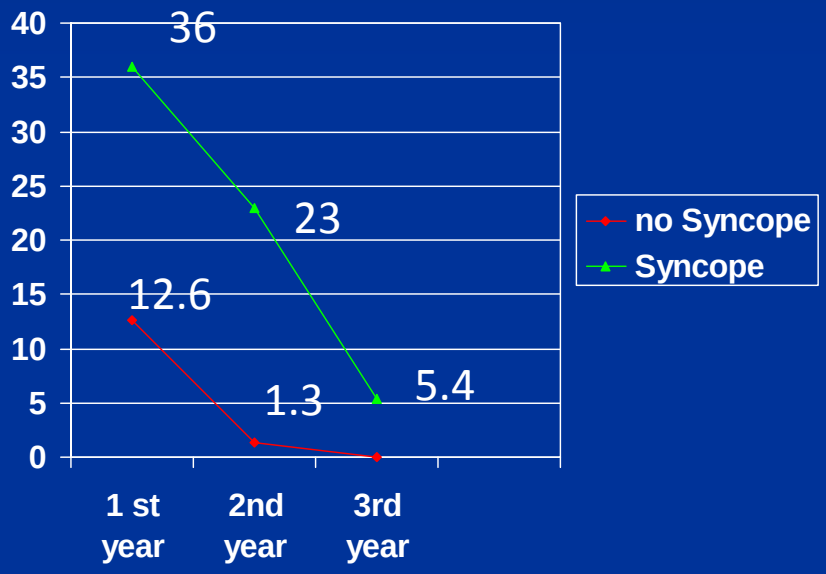

Event rate (%)
syncope
non-syncope
P=0.05
21.3
3.8
P=0.03
8
0
P=0.01
18.7
3.8
P=0.03
17.3
6.2
P=0.5
6.7
5
VT
VF
shock
ATP
inapp.

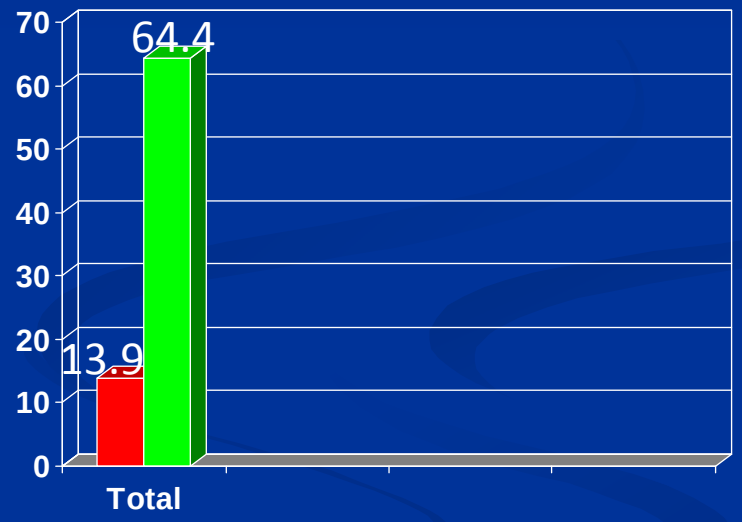
Events(%)

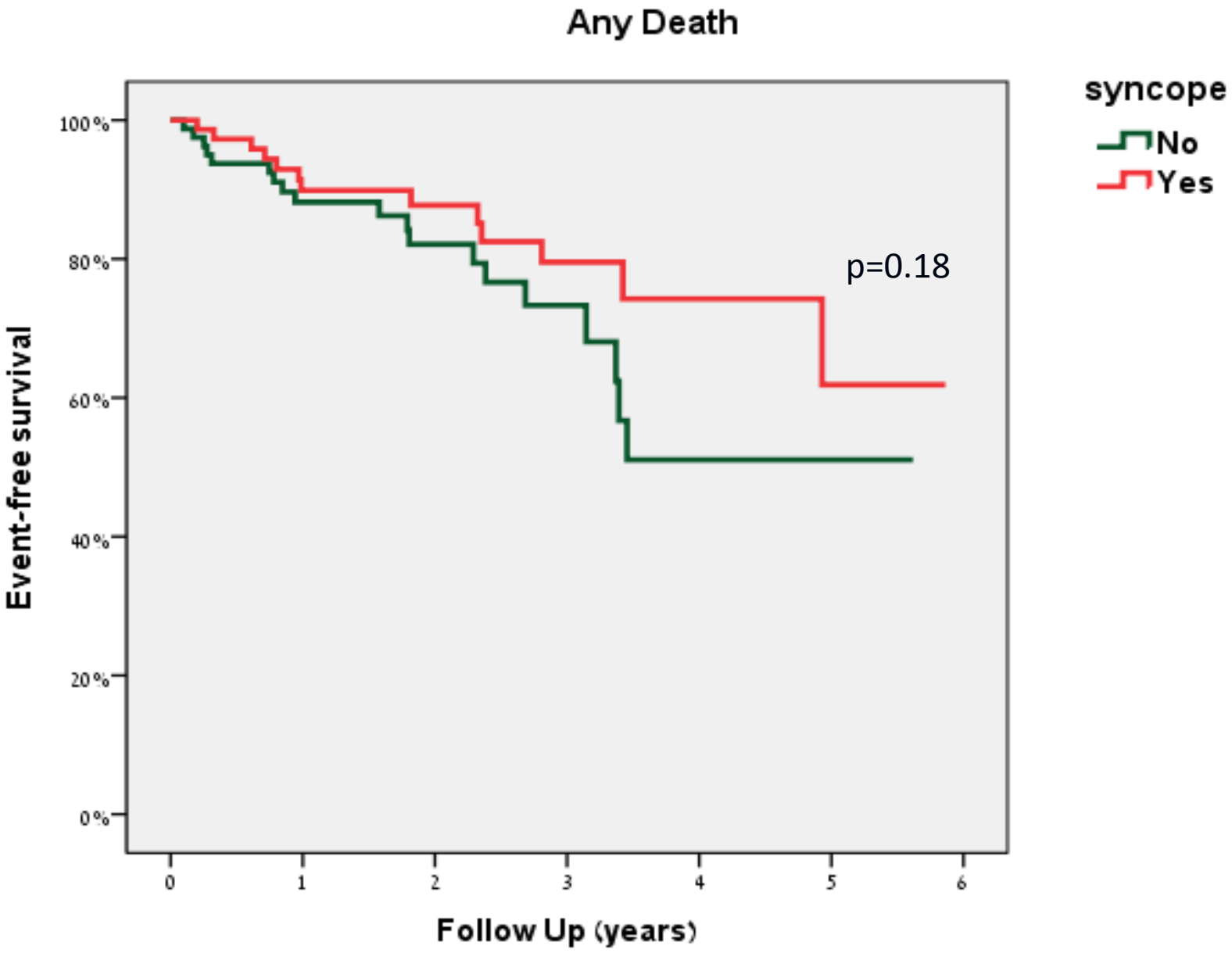

(%)
25
20
15
10
5
0
8.3
16.7
2
12.1
20.8
2
8.3
16.7
1
shock
VT/VF
ATP
Ischemic CMP
non Isch CMP
HOCM

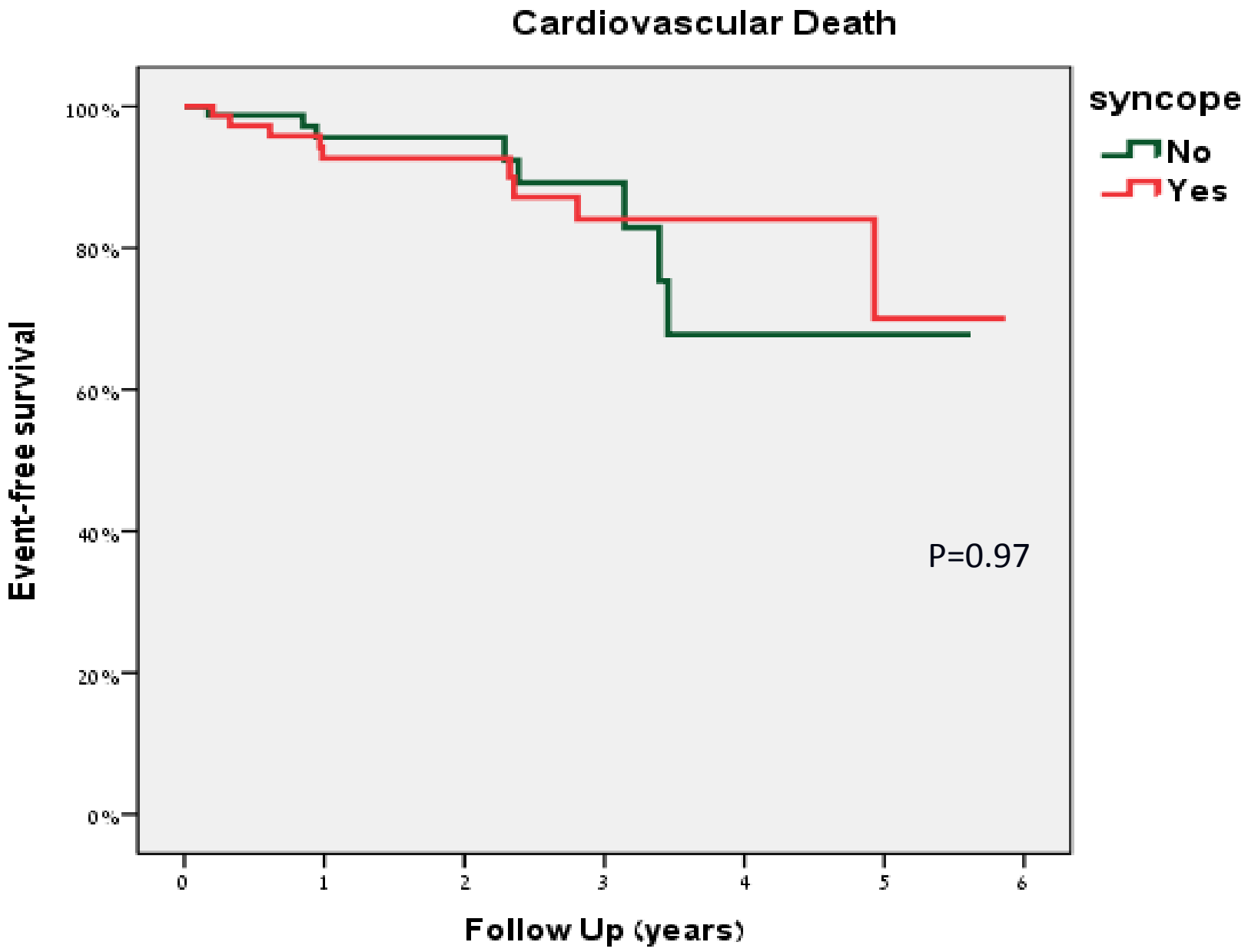
Events: Shock therapy/ATP/VT-VF(%)

P<0.05






Any Death
syncope
No
Yes
p=0.18
Event-free survival
100%
80%
60%
40%
20%
0%
0
1
2
3
4
5
6
Follow Up (years)


Cardiovascular Death
Event-free survival
100%
80%
60%
40%
20%
0%
0
1
2
3
4
5
6
Follow Up (years)
syncope
No
Yes
P=0.97

Discussion

- Patients with ICD indication for primary prevention of SCD and a history of syncope have a significant higher incidence of VT, VF, appropriate shocks and ATP therapy compared to similar patients without previous syncope.
- The higher incidence of events in the syncope group may related to different baseline characteristics.

Study limitations

- Retrospective study
- Short sample
- Non matched control group.

Conclusions

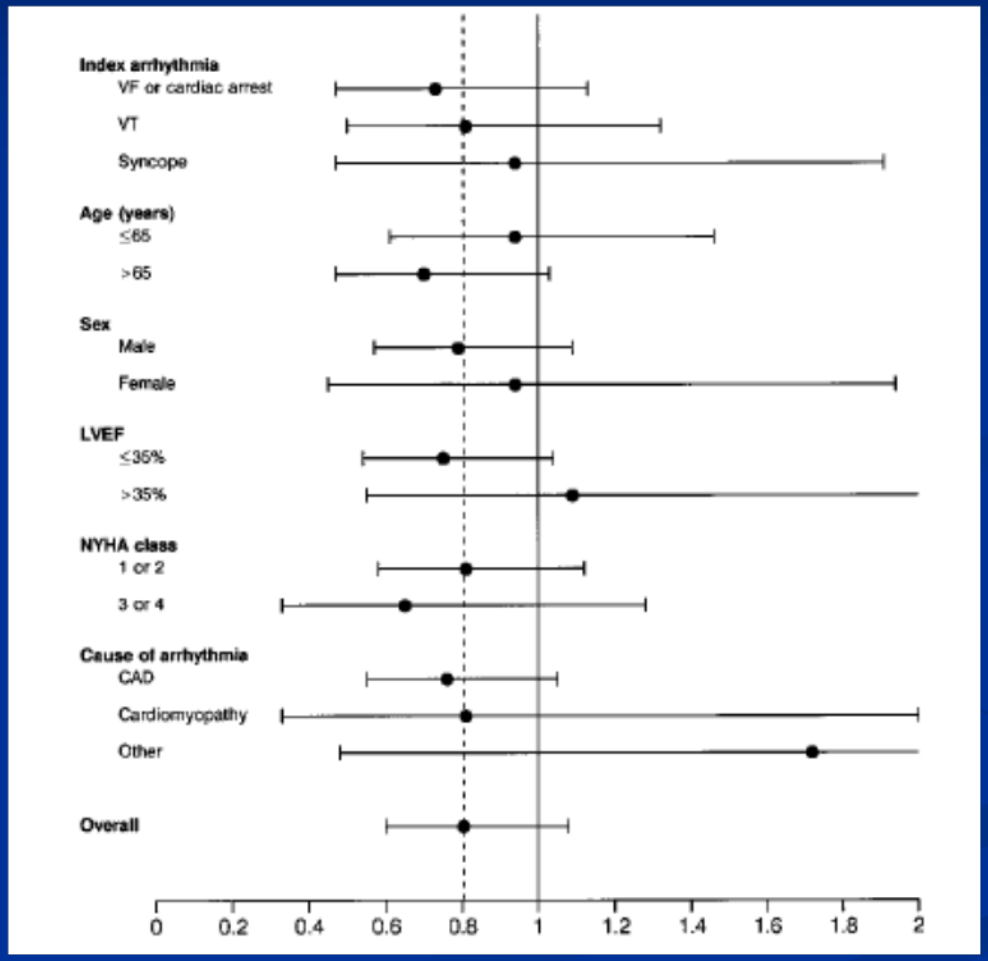
According to our data, patients that present with syncope before the ICD implantation seem to have more episodes of VT/VF and shock or ATP. However no differences in mortality were observed.

Thank You for your attention

2012 ACCF/AHA/HRS Guidelines for Device-Based Therapy of Cardiac Rhythm Abnormalities

- Class 1 : ICD therapy is indicated in patients with syncope of undetermined origin with clinically relevant, hemodynamically significant sustained VT or VF induced at electrophysiological study. (*Level of Evidence: B*)16,322
- Class 2 a : is reasonable for patients with unexplained syncope, significant LV dysfunction, and nonischemic DCM. (*Level of Evidence: C*)

CIDS Study


Index arrhythmia
VF or cardiac arrest
VT
Syncope
Age (years)
≤65
>65
Sex
Male
Female
LVEF
≤35%
>35%
NYHA class
1 or 2
3 or 4
Cause of arrhythmia
CAD
Cardiomyopathy
Other
Overall
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2