Outcome of Alcohol Septal Ablation in Mildly Symptomatic Patients with Hypertrophic Obstructive Cardiomyopathy

A Long-Term Follow-Up Study Based on the Euro-ASA Registry

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JAHA 2017

How to treat less symptomatic patients?

Recommendations	Class[a]	Level[b]
It is recommended that septal reduction therapies be performed by experienced operators, working as part of a multidisciplinary team expert in the management of HCM.	I	C
Septal reduction therapy to improve symptoms is recommended in patients with a resting or maximum provoked LVOT gradient of ≥50 mm Hg, who are in NYHA functional Class III–IV, despite maximum tolerated medical therapy.	I	B

Elliott et al. 2014

Patients

- A total of **1427 consecutive patients** (49% women, 58.1 ± 13.6 years) treated with ASA for HOCM in 11 European centers were enrolled in the Euro-ASA registry.
- We identified **161 patients** (11%, 27% women) with baseline **NYHA class II** dyspnea and LVOTO ≥50 mmHg at rest or after provocation, who were included in this study.

Endpoints

- Survival after ASA, as compared to the sex- and age-matched general population.
- Symptomatic improvement after ASA.
- Progression of heart failure symptoms after ASA.

Short-term results

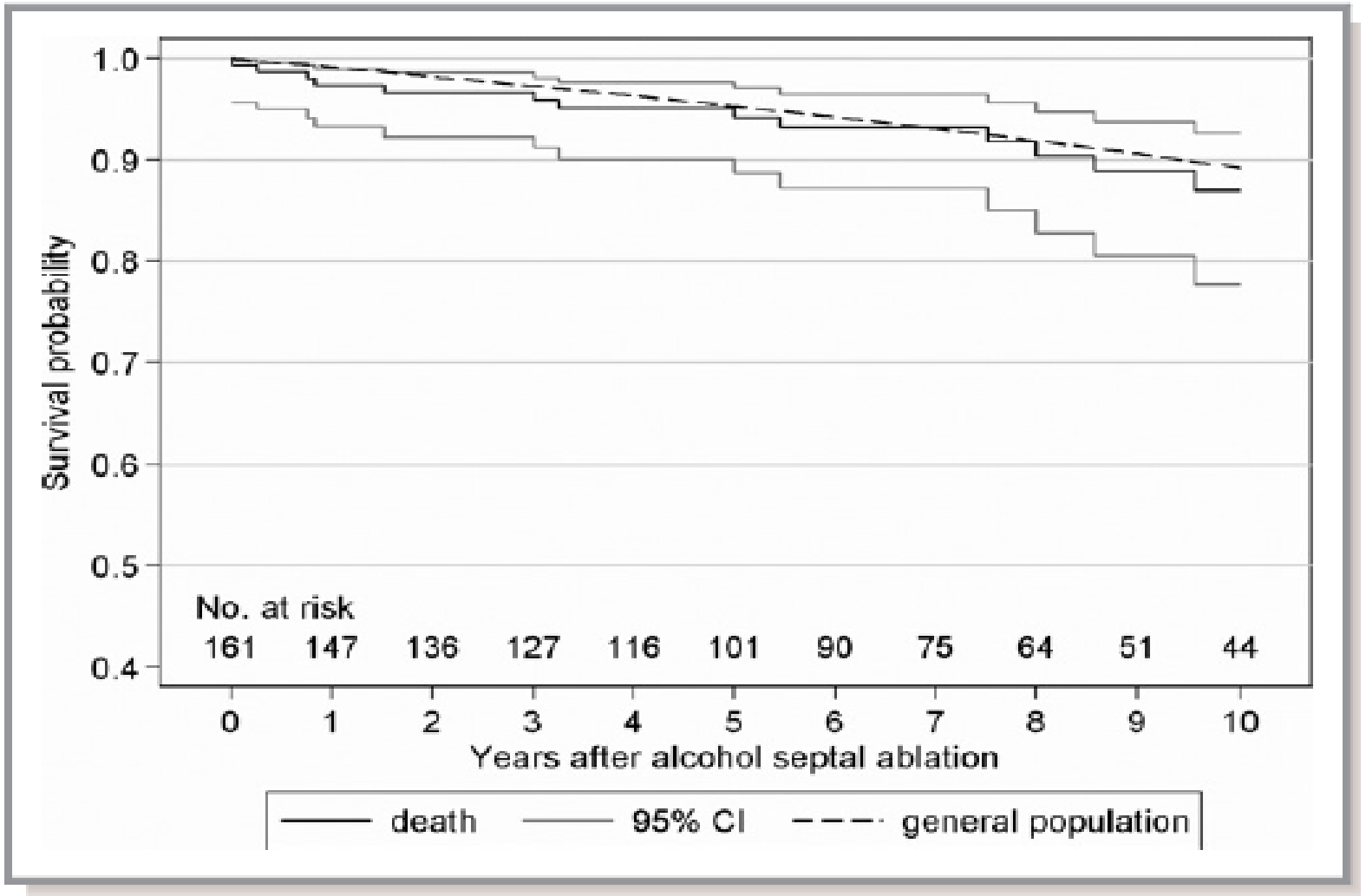
- One patient (0.6%) died of VF two days after ASA.
- The **30-day mortality rate was 0.6%.**
- Intra- or peri-procedural sustained VT/VF requiring electrical cardioversion occurred in four (2.5%) additional patients.
- Out of 149 patients without an implanted pacemaker or ICD before ASA, 14 (**9.4%**) of these patients had a **pacemaker** implanted before hospital discharge.

Long-term results

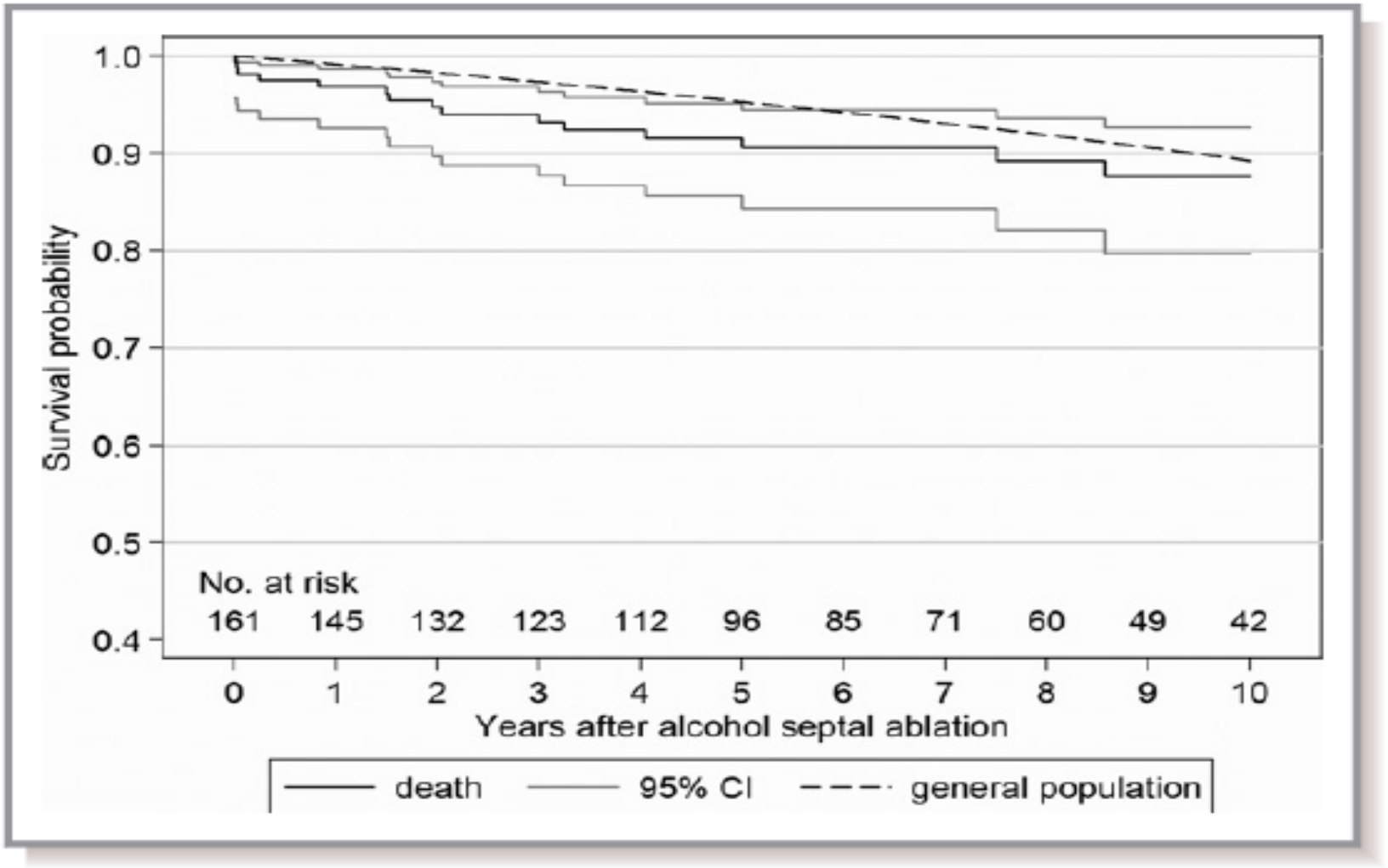
(median 4.8 years)

	Baseline (n=161)	Follow-up >30 Days (n=160)	*P* Values
Age, y	53.4±12.9	58.9±12.6	
Dyspnea, NYHA class	2.0±0	1.3±0.5	<0.01
Episodes of syncope, %	0	5 (3.1)	<0.03
LV gradient at rest, mm Hg	63.3±31.7	14.6±19.0	<0.01
LV diameter, mm	43.8±6.7	46±5.8	<0.01
Left atrium diameter, mm	47.1±6.9	44.7±6.4	<0.01
LV ejection fraction, %	71±9	68±8	0.02
Basal septum thickness, mm	20.6±4.3	15.7±4.4	<0.01

Kaplan-Meier survival curves describing all-cause mortality and compared with that expected in the general population after adjustment for age and sex (p = 0.62).



Kaplan-Meier survival curves describing all-cause mortality plus the first appropriate ICD discharge or resuscitation and compared with survival expected in the general population after adjustment for age and sex (p = 0.33).



NYHA class

- A total of 111 (**69%**) patients were in NYHA class I
- A total of 46 (**29%**) patients were in NYHA class II
- A total of 3 (**2%**) patients were in NYHA class III at the last clinical check-up.

Conclusions

- Carefully selected patients with mild symptoms (NYHA class II) and severe LVOTO treated with ASA had a long-term prognosis similar to that of the sex- and age-matched general population.
- These patients were at minimal risk (2%) for developing severe heart failure (NYHA class >II) symptoms during long-term (median 4.8 years) follow-up.
- Seventy percent of patients achieved NYHA functional class I.
- 88% of patients had LVOT gradient ≤30 mmHg at the last clinical check-up.
- The absence of NYHA class improvement was independently associated with higher long-term mortality.
- Next Guidelines on HCM should consider findings of this study.

Take-home messages

Carefully selected, mildly symptomatic HOCM patients with severe LVOTO treated with ASA in dedicated centres have long-term prognosis comparable with that of the age- and sex-matched general population.

These patients are at minimal risk for developing severe heart failure and most of them achieve long-term functional class NYHA I and LVOT gradient ≤30 mmHg.