

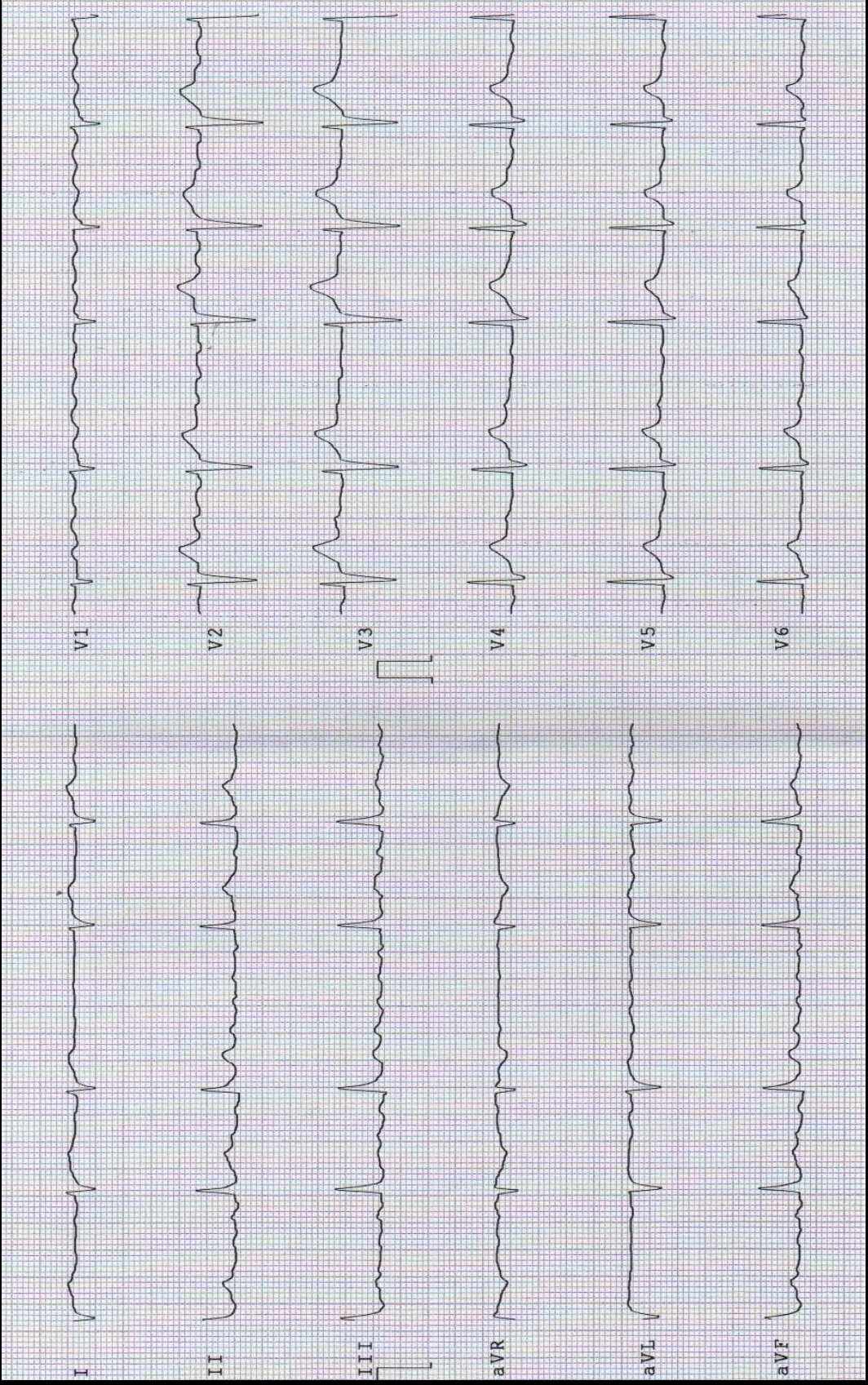
Diagnosi e Terapia delle Aritmie Cardiache: Ablazione transcatetere della Fibrillazione Atriale

Martedì dell'Ordine
15 Aprile 2014

Laboratorio di Elettrofisiologia ed
Elettrostimolazione, U.O. Cardiologia,
A.O.U. di Parma

CASO CLINICO I

- Maschio di 41 anni
- Familiarità per CAD, tabagismo
- 2008: documentazione ECG Holter di lembi di FAP -> iniziata terapia con **bisoprololo** 2,5 mg/die
- Ecocardiogramma: assenza di cardiopatia organica
- Plurimi episodi di cardiopalmo parossistico
- ECG Holter (Ottobre 2013) : evidenza di FAP in paziente paucisintomatico per cardiopalmo-> iniziata terapia con **propafenone** (325 mg x 2/die; poi 425 mg x2/die) e dabigatran (CHAD2SVASC2=0)
- ECG Holter (Novembre 2013): flutter atriale (IC) a conduzione variabile per l'intera durata della registrazione -> sospeso propafenone!



E quindi?
Che facciamo?

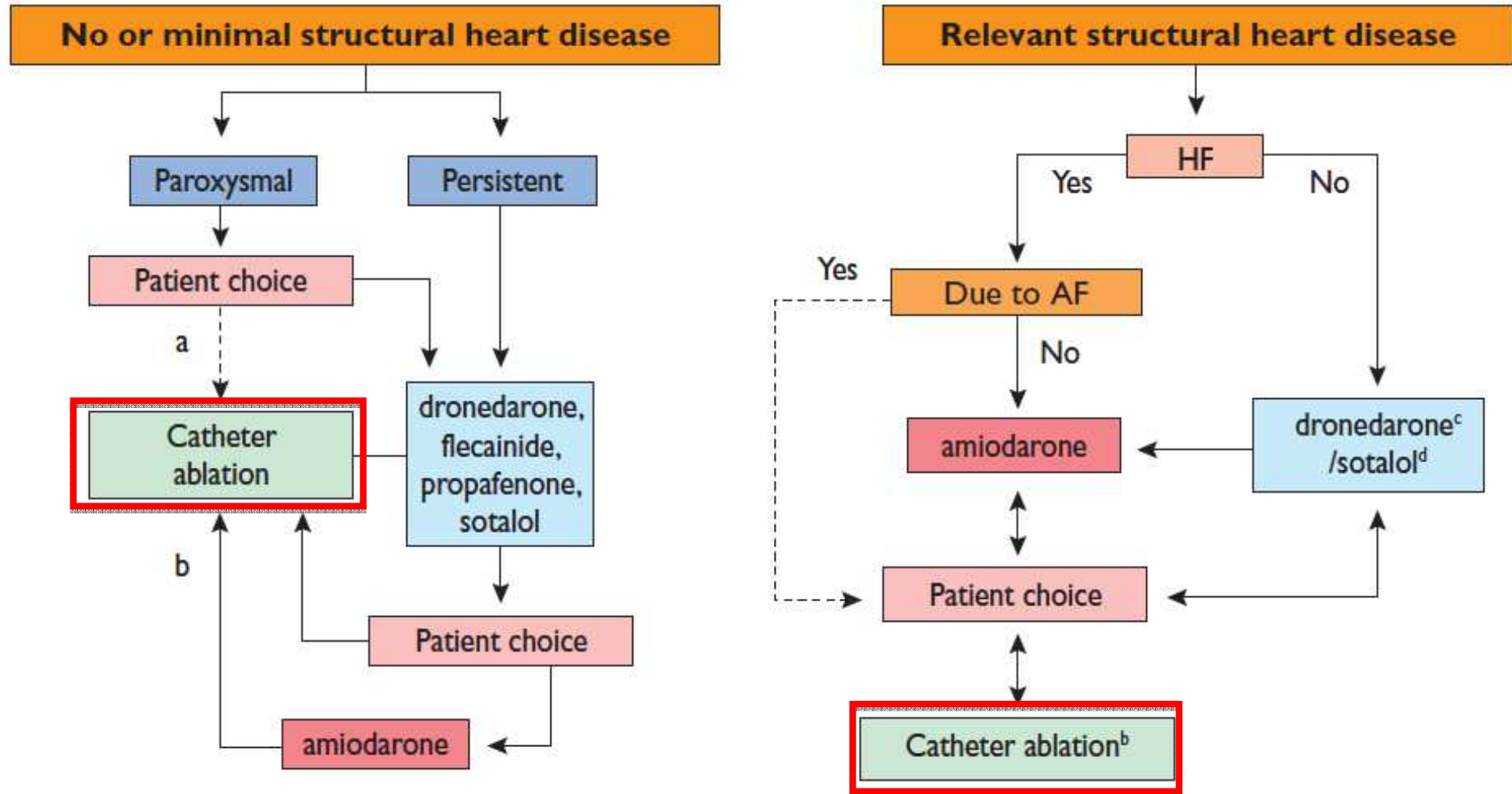


2012 focused update of the ESC Guidelines for the management of atrial fibrillation

**An update of the 2010 ESC Guidelines for the management
of atrial fibrillation**

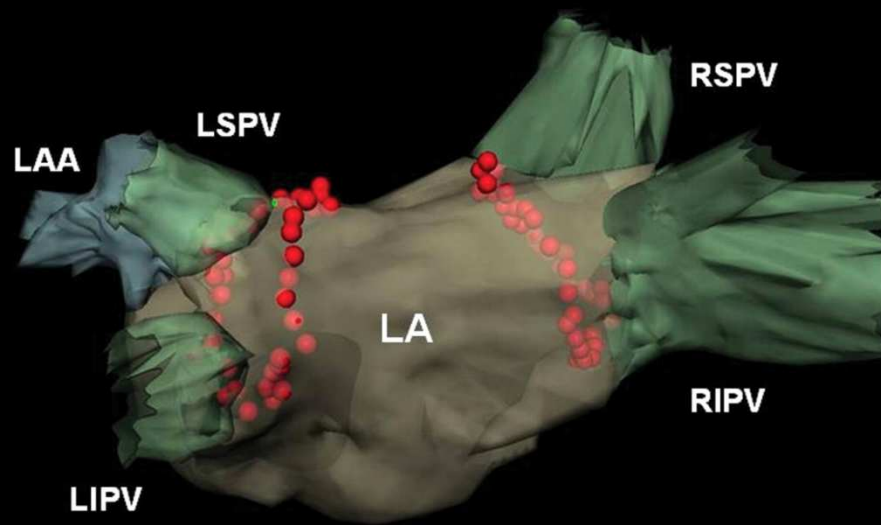
**Developed with the special contribution of the European Heart
Rhythm Association**

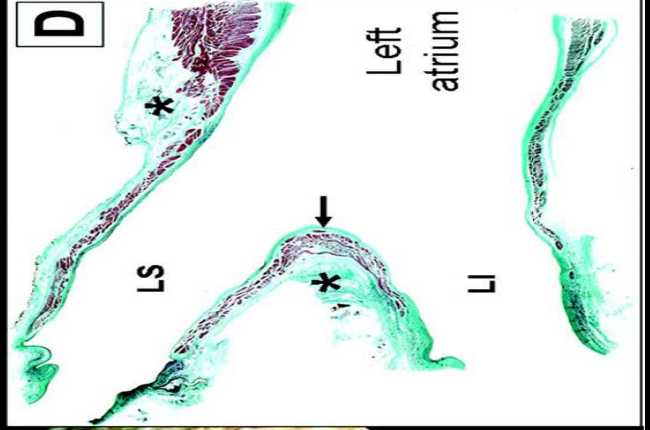
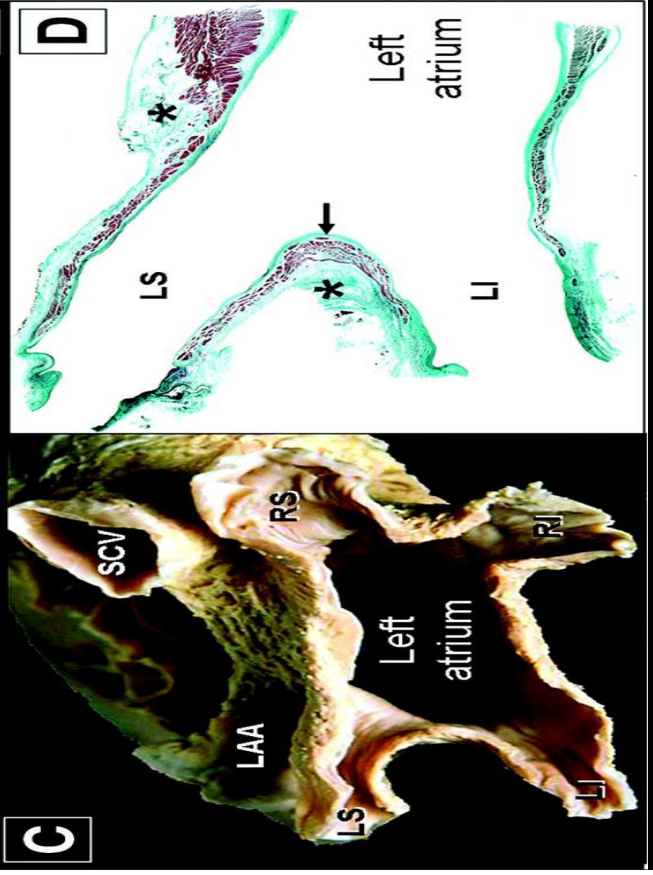
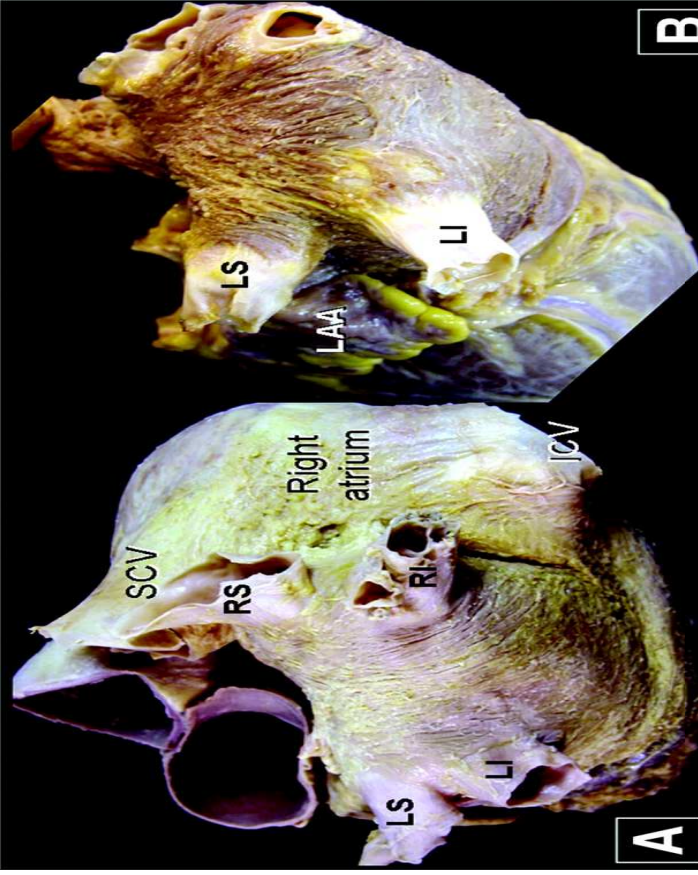
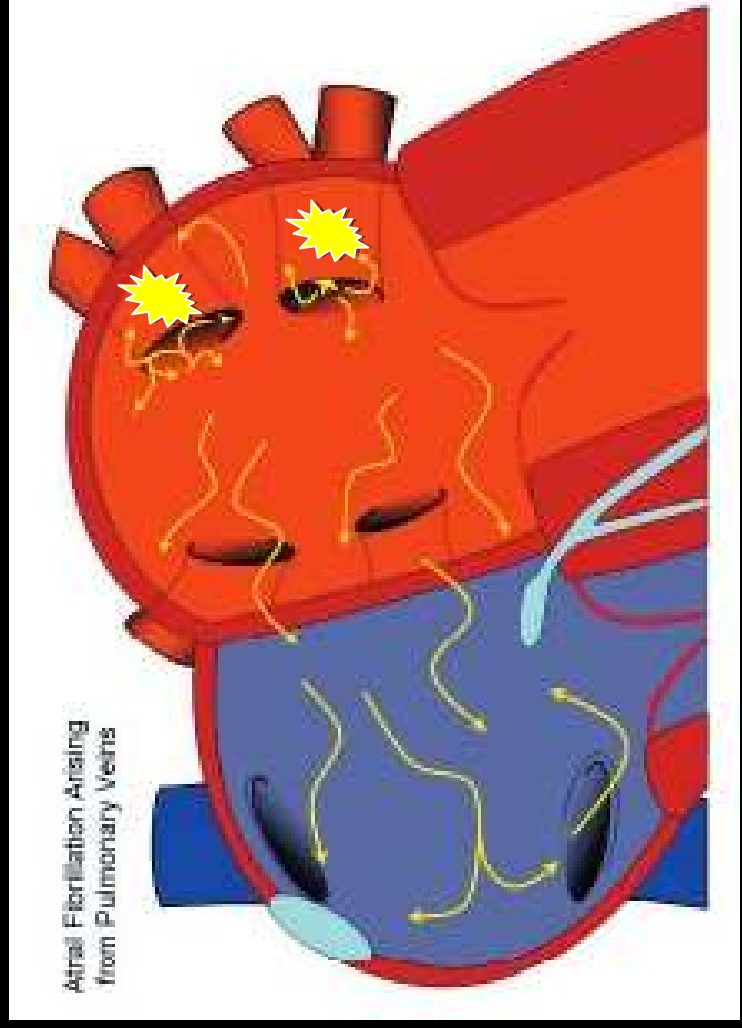
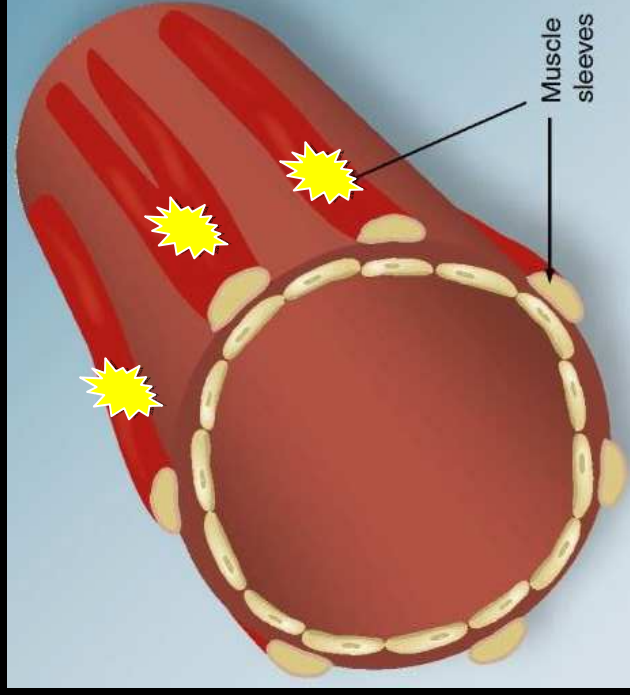
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Paulus Kirchhof (UK)**



AF = atrial fibrillation; HF = heart failure. ^aUsually pulmonary vein isolation is appropriate. ^bMore extensive left atrial ablation may be needed. ^cCaution with coronary heart disease. ^dNot recommended with left ventricular hypertrophy. Heart failure due to AF = tachycardiomyopathy.

Isolamento delle
vene polmonari??





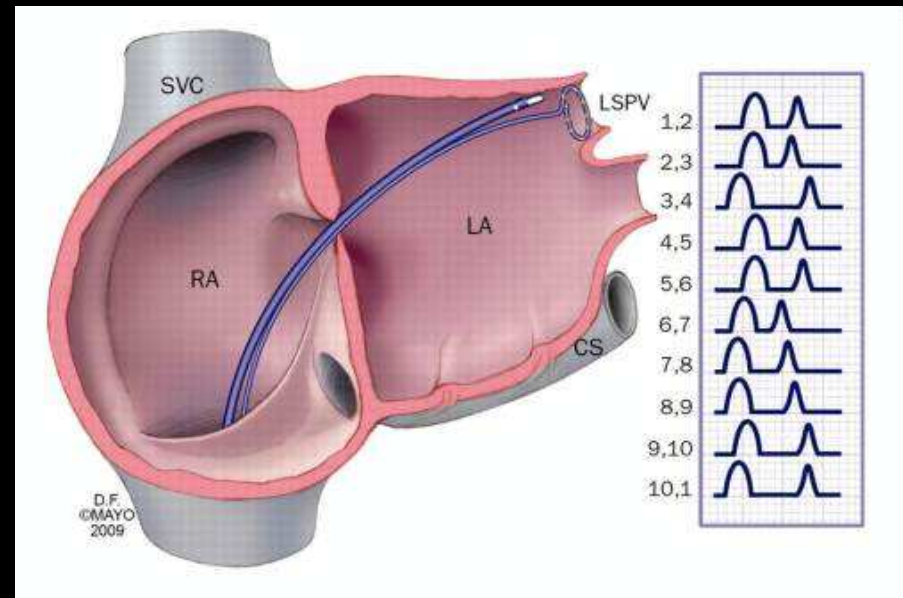
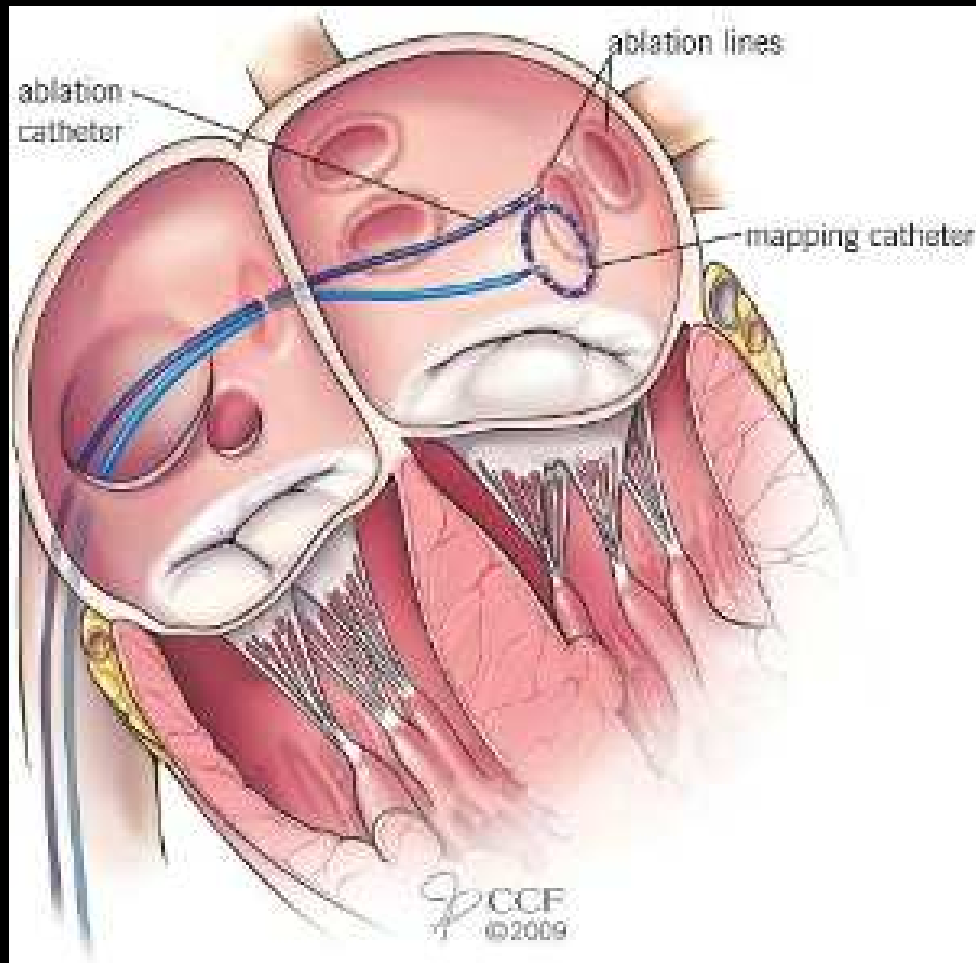
B

D

A

C

Isolamento delle vene polmonari



Treatment of Atrial Fibrillation With Antiarrhythmic Drugs or Radiofrequency Ablation

Two Systematic Literature Reviews and Meta-Analyses

Hugh Calkins, MD; Matthew R. Reynolds, MD, MSc; Peter Spector, MD; Manu Sondhi, MD, MBA; Yingxin Xu, PhD; Amber Martin, BS; Catherine J. Williams, MPH; Isabella Sledge, MD, MPH

Background—Although radiofrequency catheter ablation (RFA) has evolved from an experimental procedure to an important treatment option for atrial fibrillation, the relative safety and efficacy of catheter ablation relative to that of antiarrhythmic drug (AAD) therapy has not been established.

Methods and Results—Two separate systematic reviews were conducted: one on RFA and the other on AAD to provide accurate and broadly representative estimates of the clinical efficacy and safety of both therapies in the treatment of atrial fibrillation. Electronic searches were conducted in EMBASE and MEDLINE from 1990 to 2007. For the RFA review, all study designs were accepted. For the AAD review, articles were limited to prospective studies on the following drugs of interest: amiodarone, dofetilide, sotalol, flecainide, and propafenone. Data were extracted by 1 reviewer, with a second reviewer performing independent confirmation of extracted data. Sixty-three RFA and 34 AAD studies were included in the reviews. Patients enrolled in RFA studies tended to be younger (mean age, 55 versus 62 years), had longer duration of atrial fibrillation (6.0 versus 3.1 years), and had failed a greater number of prior drug trials (2.6 versus 1.7). The single-procedure success rate of ablation off AAD therapy was 57% (95% CI, 50% to 64%), the multiple procedure success rate off AAD was 71% (95% CI, 65% to 77%), and the multiple procedure success rate on AAD or with unknown AAD usage was 77% (95% CI, 73% to 81%). In comparison, the success rate for AAD therapy was 52% (95% CI, 47% to 57%). A major complication of catheter ablation occurred in 4.9% of patients. Adverse events for AAD studies, although more common (30% versus 5%), were less severe.

Conclusions—Studies of RFA for treatment of atrial fibrillation report higher efficacy rates than do studies of AAD therapy and a lower rate of complications.

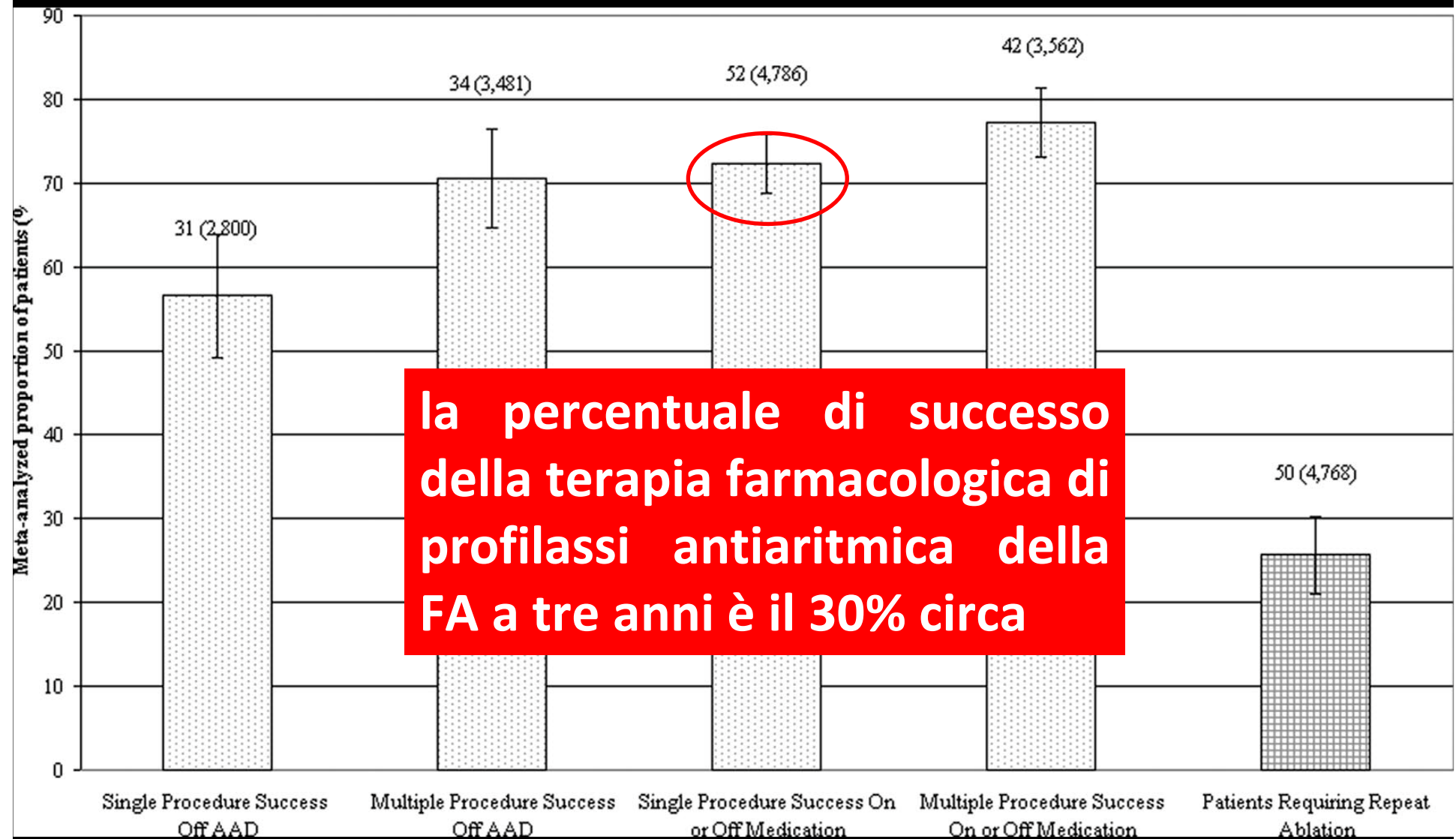


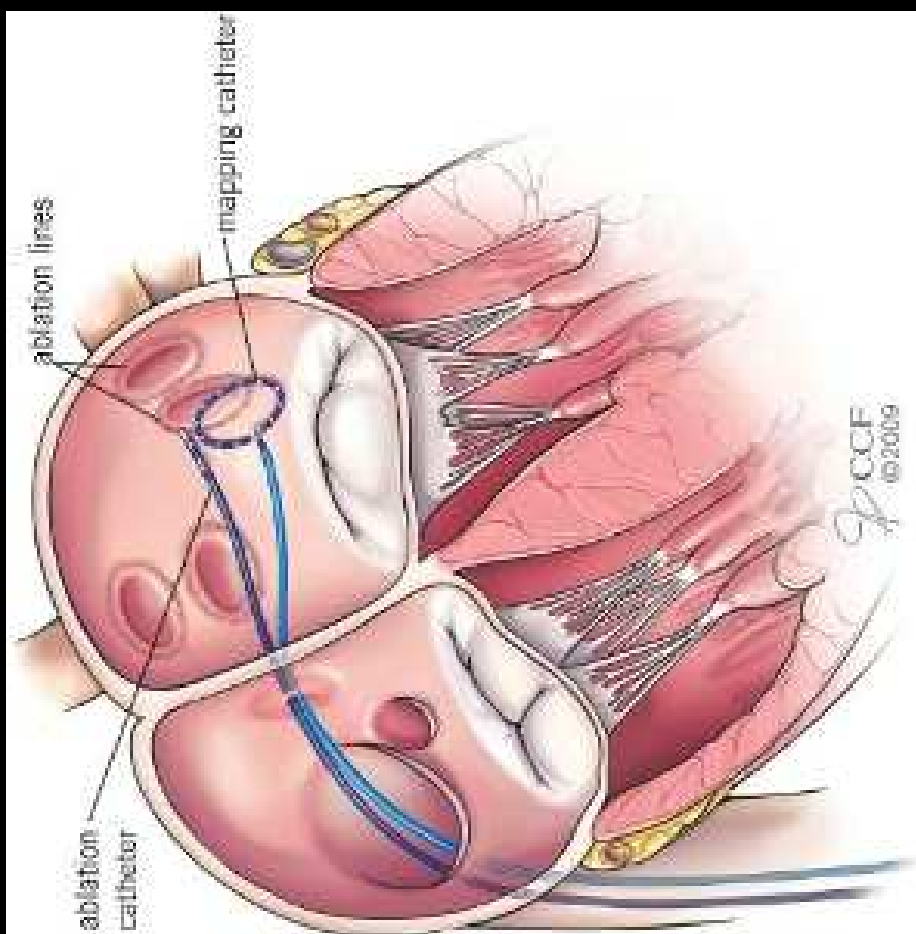
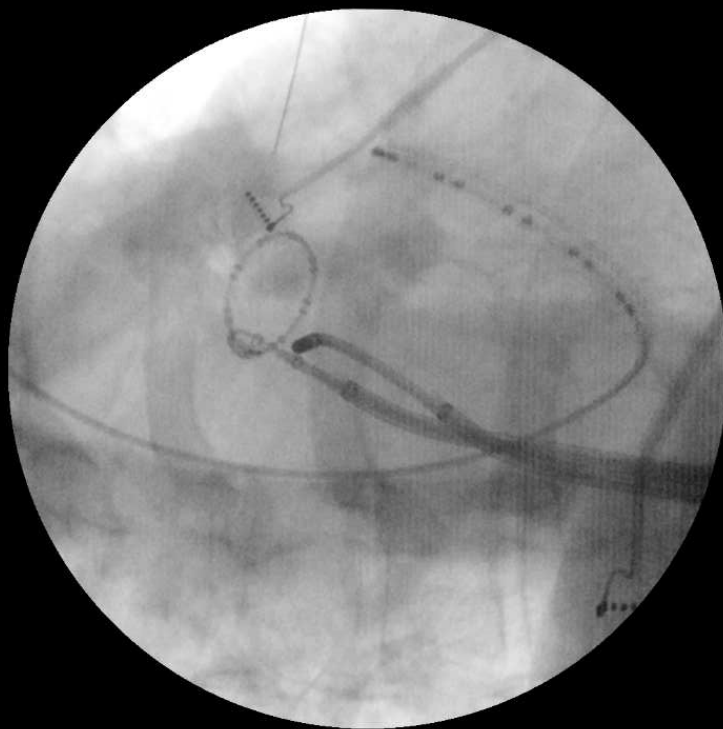
Table 5. Safety Outcomes for Patients With AF Undergoing Catheter Ablation

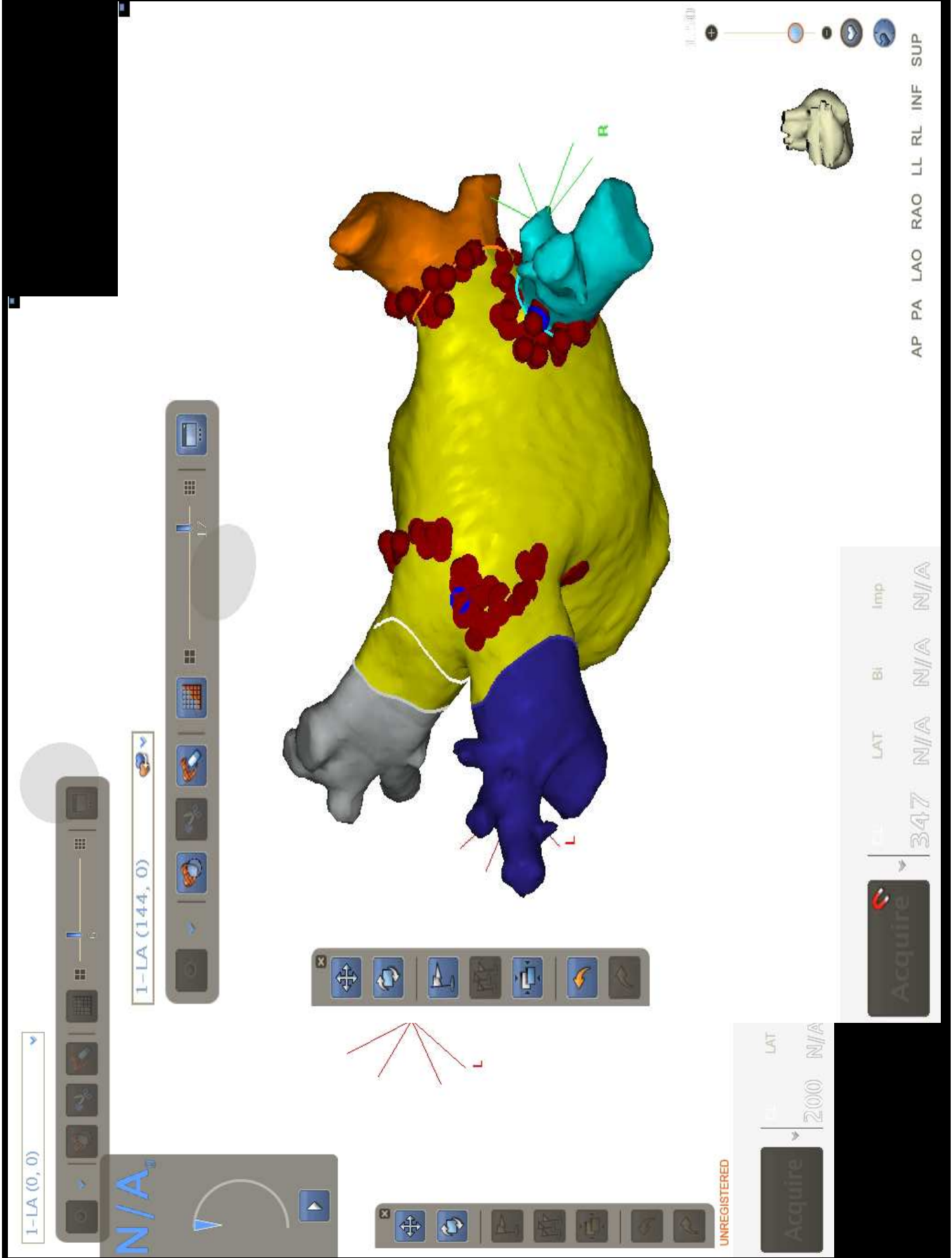
Outcomes	t	n/N	%
Mortality			
Death overall	65	42/5781	0.7
Procedure-related	64	0/5192	0.0
Vascular access complications			
Arteriovenous fistula	32	1/2885	0.0
Bleeding	33	1/2960	0.0
Hematoma	38	17/3719	0.5
Pneumothorax	34	0/2974	0.0
Femoral artery pseudoaneurysm	34	15/3032	0.5
Periprocedure events			
Stroke, ischemic	62	17/5665	0.3
TIA	60	13/5467	0.2
Cardiac tamponade	63	45/5723	0.8
PE	60	3/5496	0.1
DVT	56	1/4758	0.0
Other embolism	57	10/5347	0.2
LA-esophageal fistula	60	0/5496	0.0
Other fistula	58	3/5407	0.1
Pericardial effusion	64	36/5719	0.6
PV stenosis*	65	91/5831	1.6
AV block	60	1/5496	0.0
CHF exacerbation	60	0/5496	0.0
Need for a pacemaker	46	4/3902	0.1
Total No. of patients with events	28	97/1964	4.9

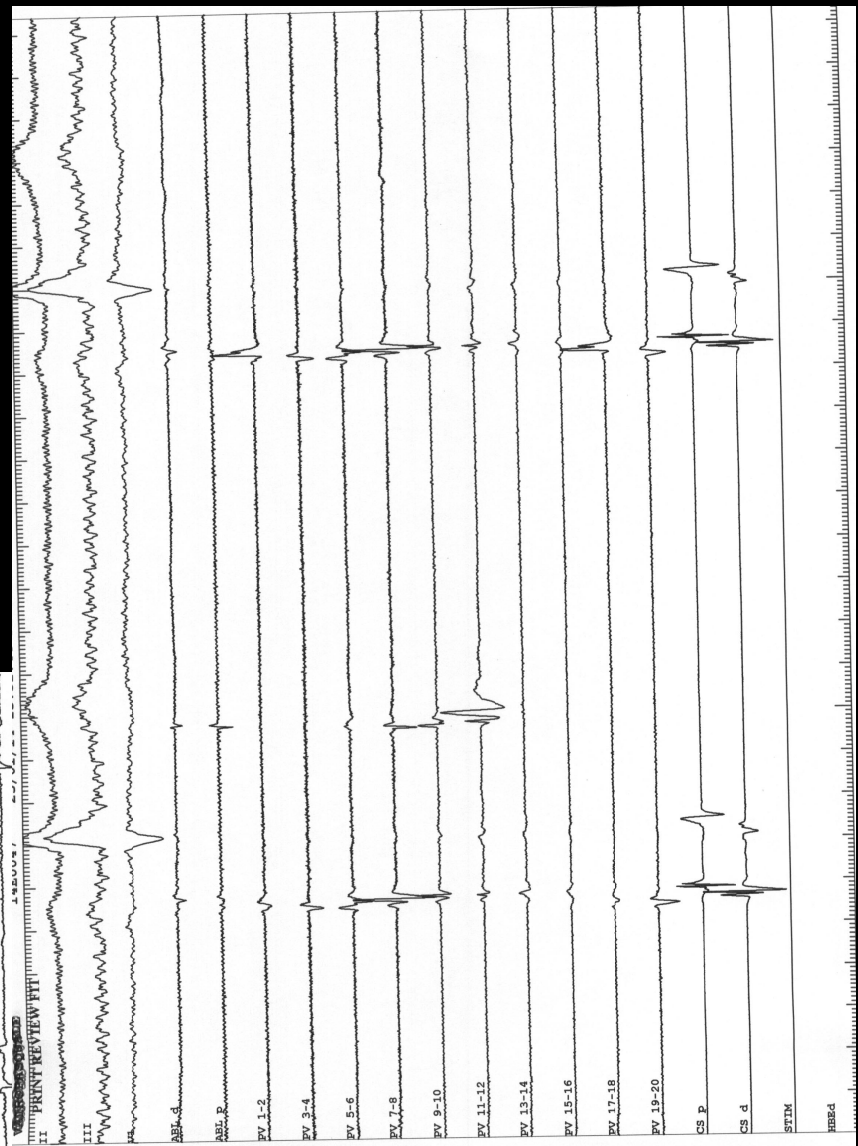
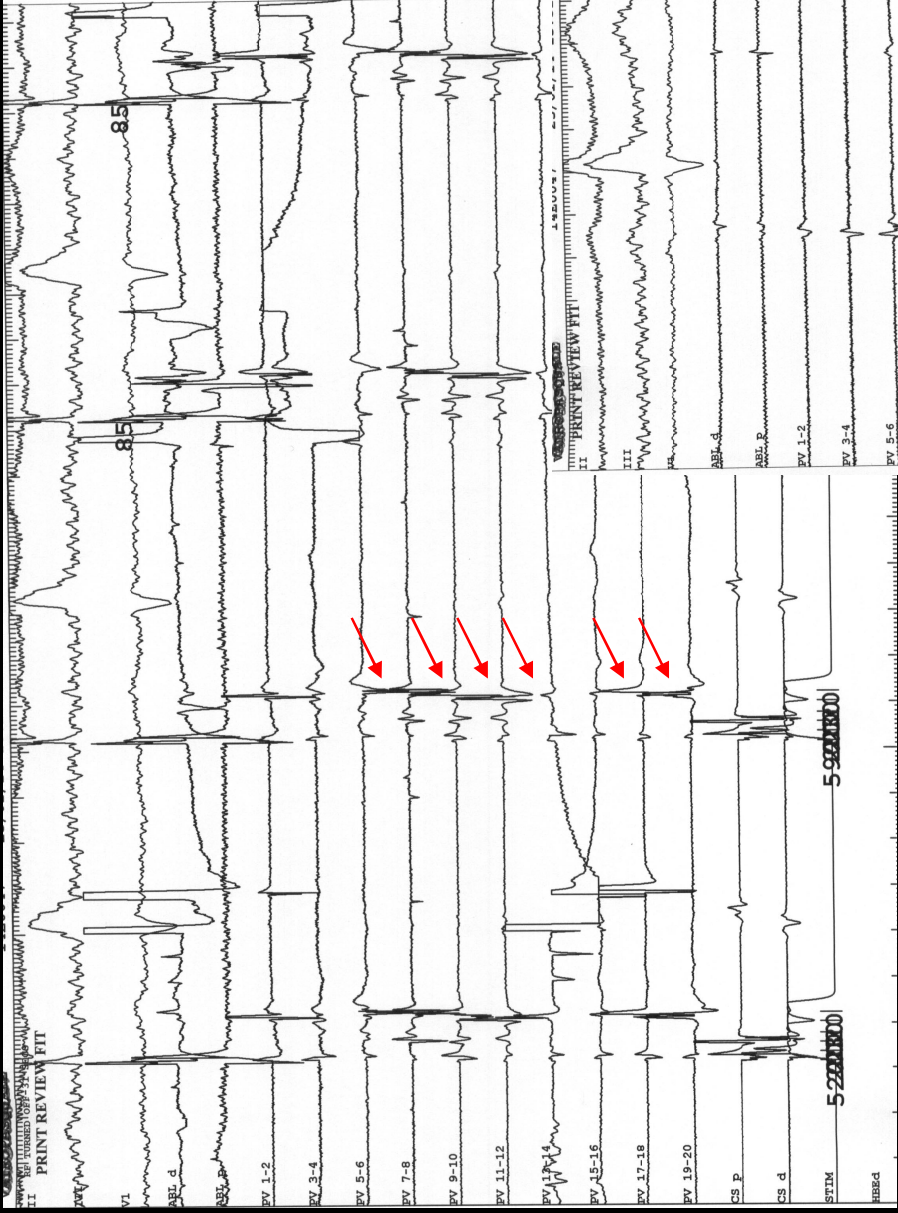
Table 6. Safety Outcomes for Patients With AF Receiving AAD Therapy

Safety Outcomes	t	n/N	%
Mortality			
Death overall	33	120/4291	2.8
Sudden death	21	18/2900	0.6
Treatment-related death	22	15/3179	0.5
Not treatment-related death	20	40/3023	1.3
Adverse events			
CV events	10	58/1572	3.7
Bradycardia	19	44/2349	1.9
GI	16	97/1499	6.5
Neuropathy	4	48/969	5.0
Thyroid dysfunction	5	19/576	3.3
Torsades	12	16/2238	0.7
Q-T* prolongation	12	5/2034	0.2
Total No. of patients with events	24	989/3318	29.8
Discontinuations			
Total	32	1035/4347	23.8
Due to AE	32	384/3682	10.4
Due to inefficacy	12	229/1694	13.5
Due to noncompliance	4	19/457	4.2

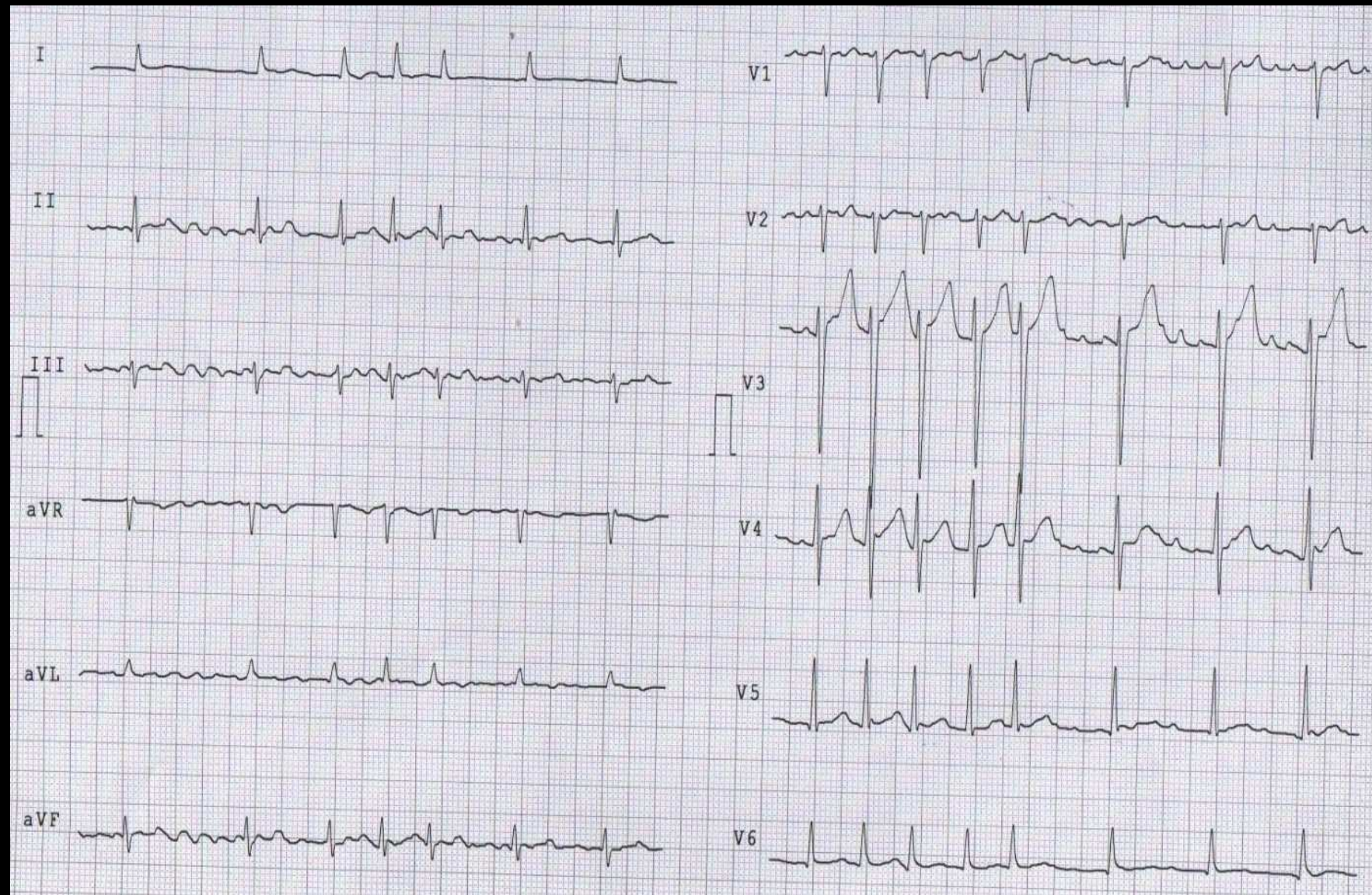
- Proposto SEF + procedura di isolamento delle vene polmonari mediante radiofrequenza
- Eseguita TAC cuore per anatomia venosa polmonare
- Eseguito ecocardiogramma trans-esofageo: assenza di trombosi in auricola sx





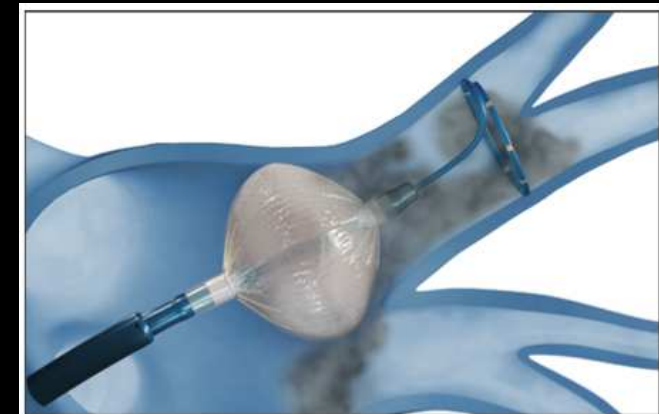
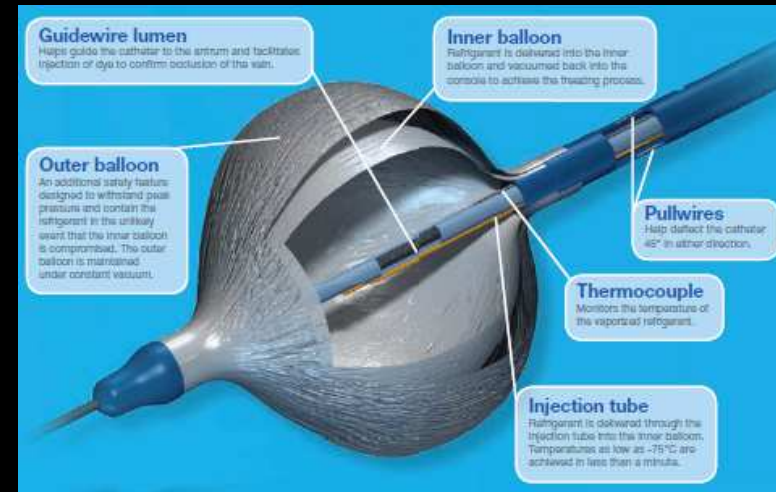


Caso clínico II



- Plurimi episodi di cardiopalmo parossistico con documentazione ECG Holter di FAP. Iniziata terapia di profilassi antiaritmica con flecainide inefficace nella prevenzione delle recidive.
- Accesso in PS (Dicembre 2013) con riscontro ECG di flutter atriale a prevalente conduzione 4:1 (Flutter IC) -> sospesa flecainide inefficace ed iniziata terapia con bisoprololo 2,5 mg/die.
- Proposto ricovero per SEF-> eseguita TC cuore ed ECO TE

Cryoballoon



Cryoballoon ablation for pulmonary vein isolation in patients with paroxysmal atrial fibrillation

Review of the literature and initial experience

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Summary

Cryoballoon ablation has emerged as a novel treatment option for drug-refractory atrial fibrillation (AF). The purpose of this manuscript is to report the initial experience of a Swiss centre performing cryoballoon ablation, and to provide a critical review of the literature.

Fourteen patients (age 59 ± 10 years, LVEF $57 \pm 5\%$, left atrial size 41 ± 3 mm) with paroxysmal AF were studied. After transseptal puncture, a 28 mm cryoballoon catheter was inserted into the left atrium. After balloon positioning at the antrum of each pulmonary vein (PV), cryoballoon ablation was performed (5 minutes / application). The endpoint of the ablation was pulmonary vein isolation (PVI).

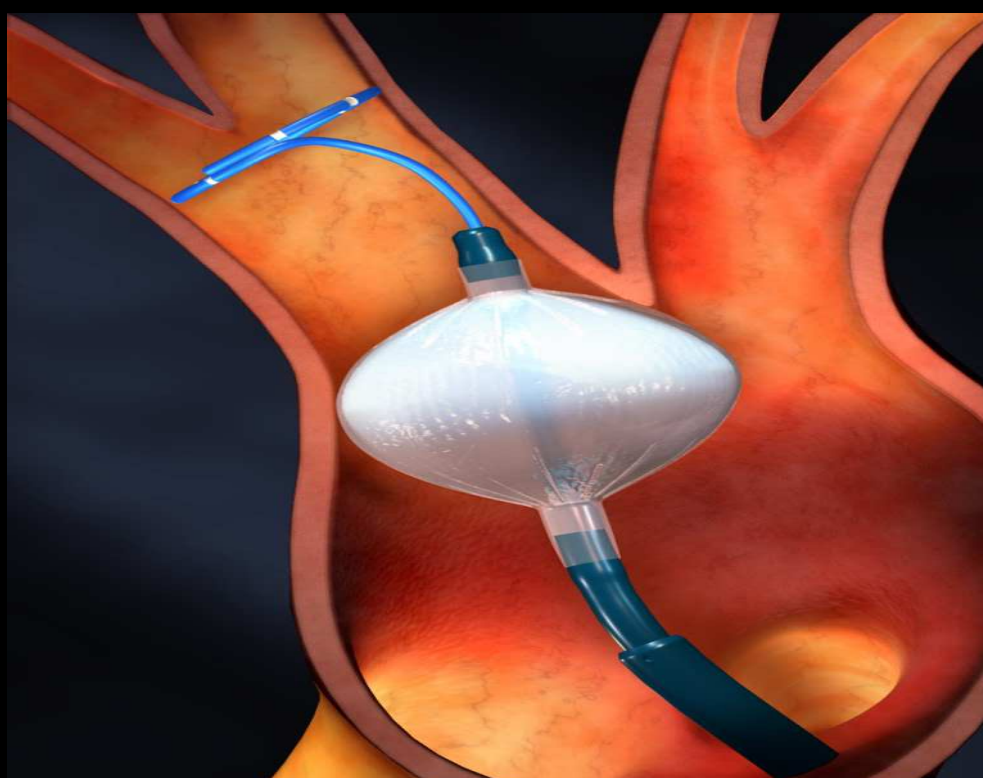
Eighty-four percent of all PVs could be isolated with the cryoballoon alone. There was no specific distribution of the PVs requiring additional non-balloon ablation. The mean procedure time was 199 ± 56 minutes. One patient developed

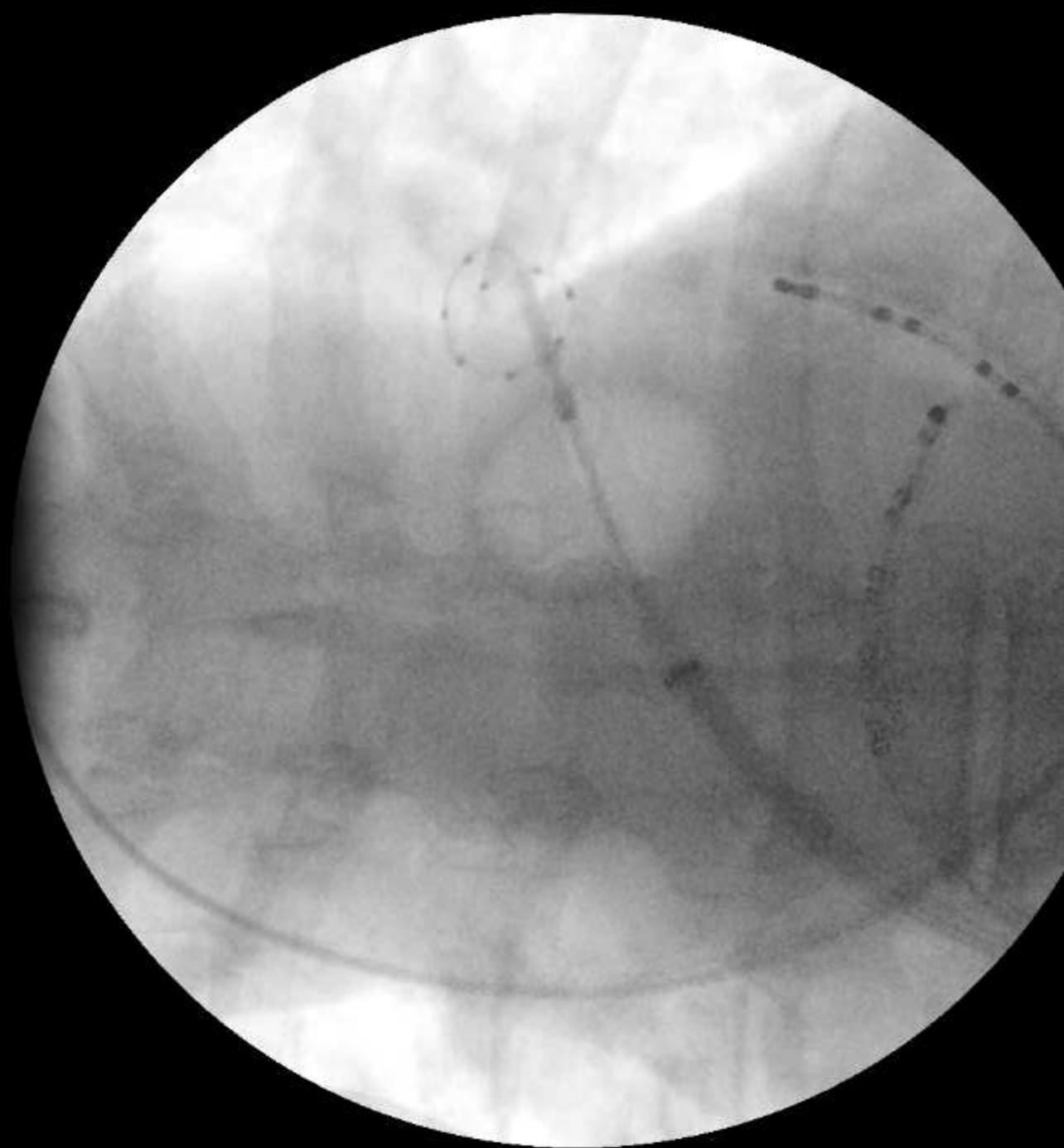
tamponade requiring drainage. No phrenic nerve palsies occurred. After a period of follow-up of 12 ± 3 months, 10/14 patients (71%) were in sinus rhythm without antiarrhythmic drugs. A review of AF ablation procedures performed at our centre during a one-year period showed that documentation of persistent AF or other arrhythmias were the causes for not using the cryoballoon in 49% of patients because additional linear lesions may be required in these cases.

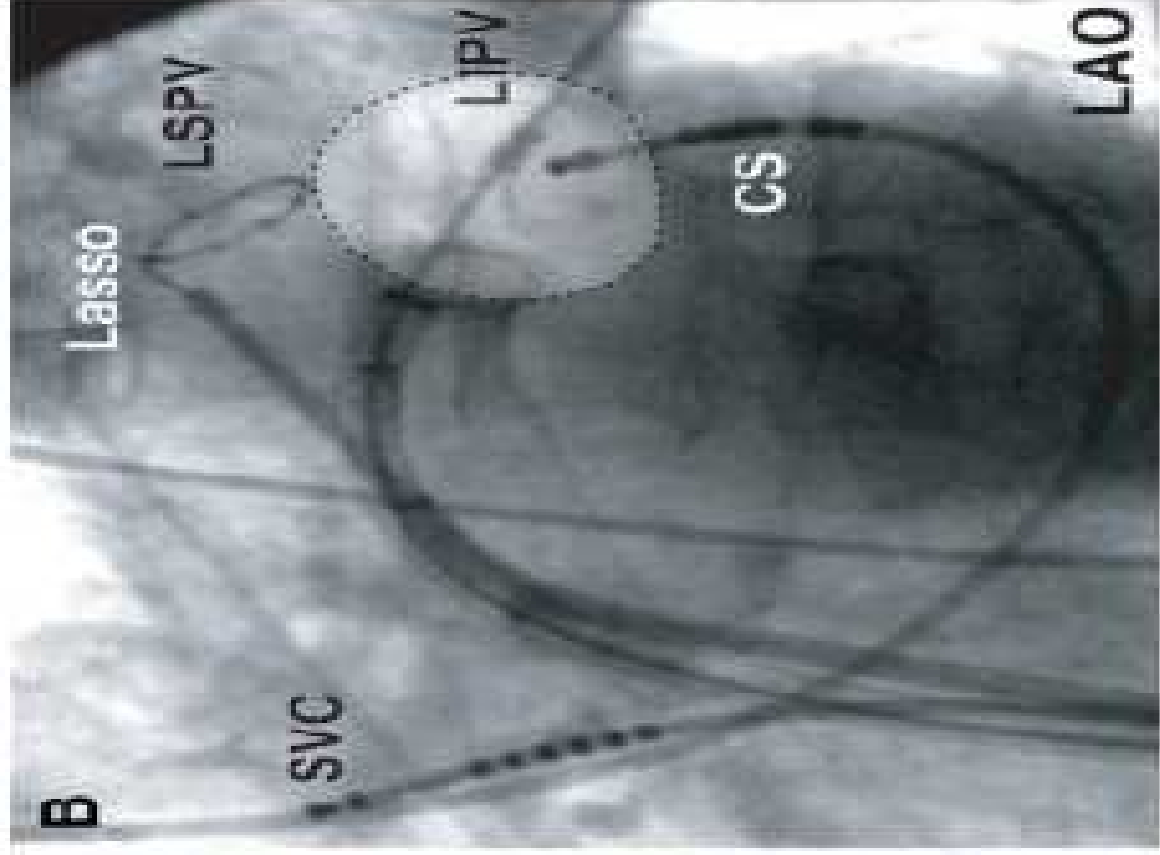
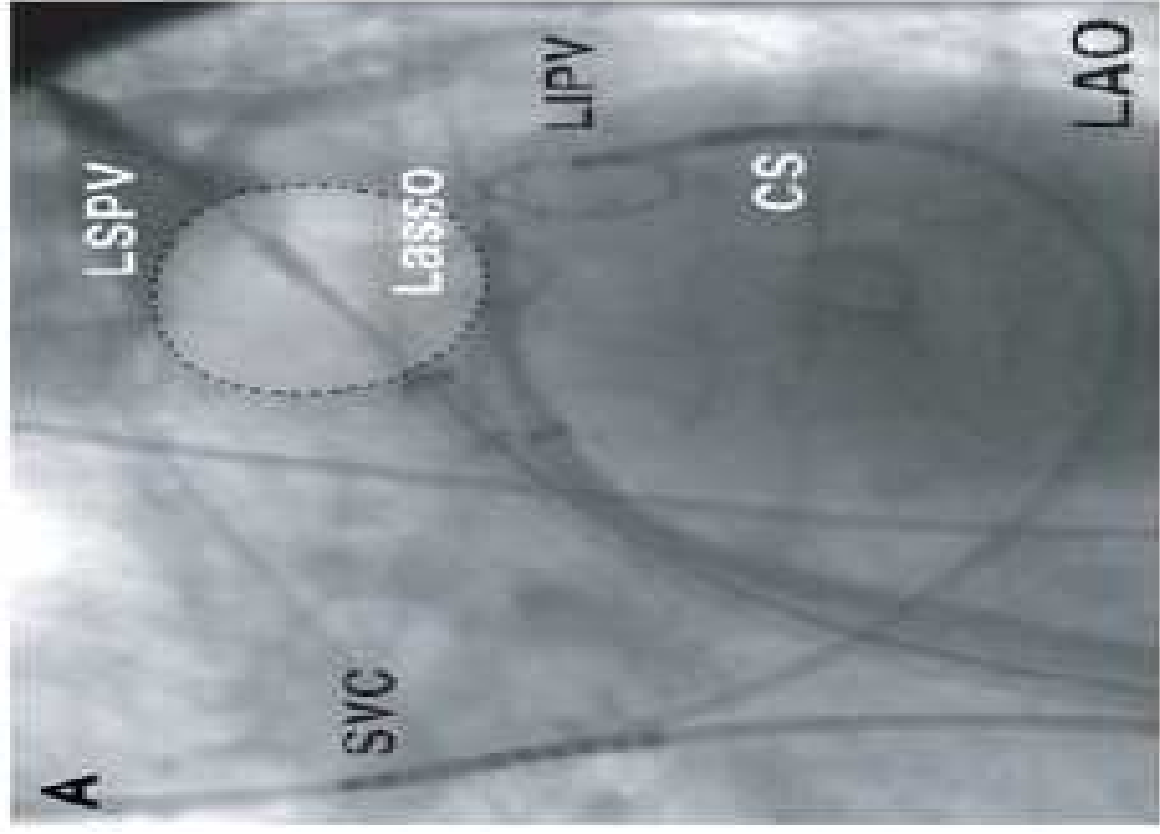
Cryoballoon ablation is an interesting new tool for PVI. The success rate of 71% after a 1-year follow-up is not higher when compared to radiofrequency ablation. Furthermore, data on long-term outcomes are lacking. Randomised comparisons with radiofrequency catheter ablation are needed.

Key words: cryoballoon ablation; paroxysmal atrial fibrillation; pulmonary vein isolation









Conclusioni

- L'isolamento elettrico delle vene polmonari, mediante ablazione con radiofrequenza o mediante crioablazione, rappresenta il trattamento in classe I per la terapia della fibrillazione atriale parossistica refrattaria alla terapia farmacologica, in assenza di cardiopatia organica.
- Beneficiano maggiormente della crio-ablazione i Pazienti giovani con fibrillazione atriale parossistica ed osti separati delle vene polmonari.
- Dopo procedura di ablazione della FA la terapia anticoagulante orale è indicata in relazione al CHA2DS2-VASC ed all'HAS BLED del Paziente, a prescindere dal risultato ottenuto con la procedura di ablazione.