Prise en charge des arythmies à la phase aiguë de l'infarctus

Antoine Da Costa
CHU Saint Etienne

Printemps 2016 de la médecine d'urgence

Les troubles du rythme ventriculaires

Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the joint EHRA, ACCA and EAPCI Task force. Europace 2014

Mécanismes des arythmies ventriculaires d'origine ischémique

ATCD d'infarctus

Chanalopathies pré-existantes

- QT
- Hypertrophie
- WPW
- Dysplasie

Substrat

- fibrose
- hypertrophie
- dilatation
- cicatrice
- fraction d'éjection

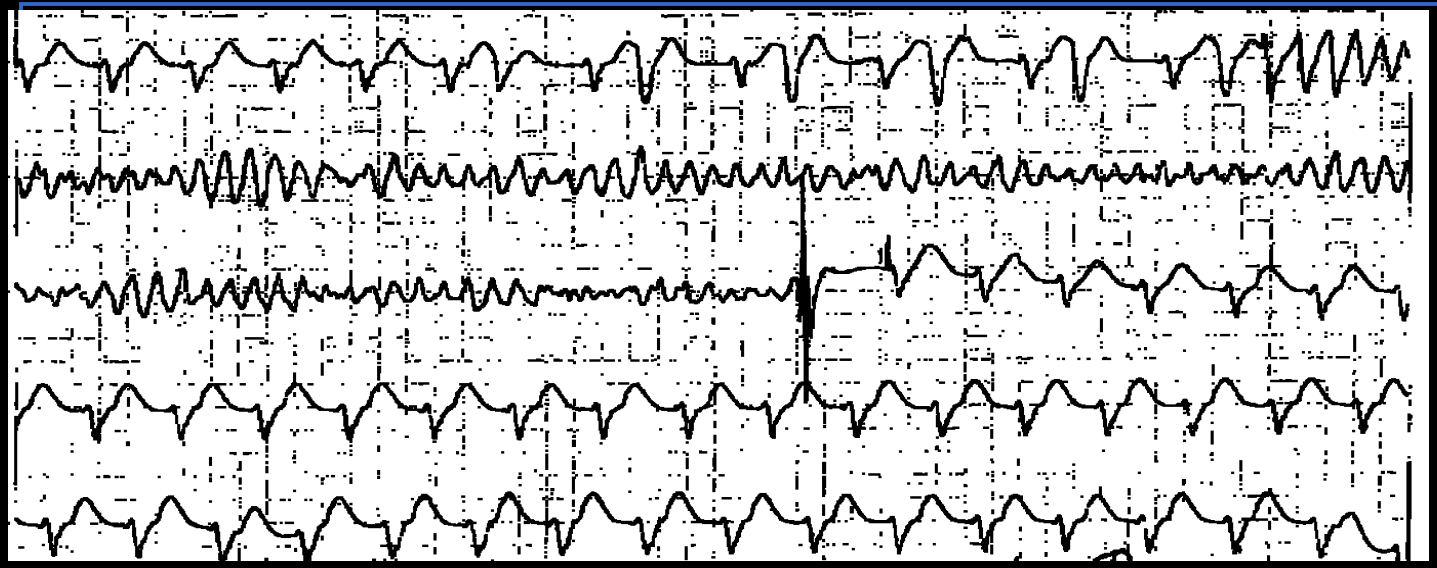
Atteinte cellulaire et facteurs d'instabilité rythmiques

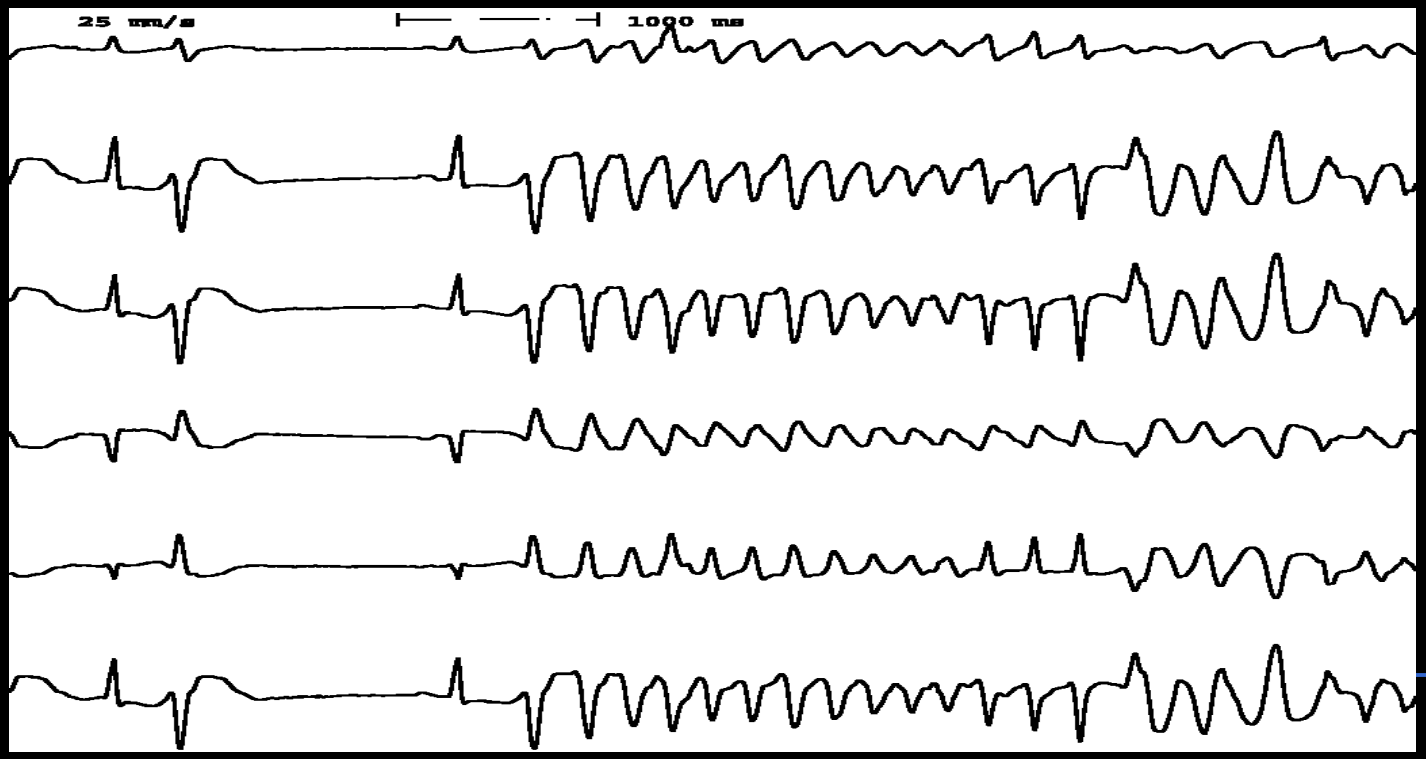
- ischémie aiguë
- dysautonomie
- reperfusion
- hémostase
- perte de connection inter-cellulaire
- altération des courants ioniques cellulaires

TV

FV

Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the joint EHRA, ACCA and EAPCI Task force. Europace 2014





FV précoce après IDM

avec insuffisance cardiaque

Situations cliniques

1. Phase d'occlusion aiguë
2. Présentation tardive:
   - 20%-30% des patients avec ischémie aigue
   - Facteurs prédictifs évènements rythmiques:
     - taux de CPK,
     - ondes Q,
     - dysfonction VG,
     - symptômes prolongés,
     - score TIMI flow 0-1
3. Patients non ou incomplètement revascularisés (ischémie prolongée)
   - revascularisation incomplète ou impossible
   - lésions calcifiées; bifurcations; no flow
   - autres lésions que la lésion coupable
4. Patients avec un substrat pré-existant
   - FE abaissée; statut coronarien; cicatrices ; dyskinésie

Early sustained ventricular arrhythmias complicating acute myocardial infarction. Piccini JP. et al. Am J Med 2008; 121: 797-804.

Critères cliniques et angiographiques	TV/FV n=472	Pas d'évènements ventriculaires n=8543	P
IC (%)	**29.9**	**9.9**	**<.001**
IDM > 6H	68.2	56	<.001
IDM transmural	**55.3**	**44.8**	**<.001**
Thrombolyse	8.9	7.7	.335
CCS class ±SD	3.9±0.5	3.8±0.6	.122
Choc cardiogénique	**18.6**	**3.1**	**<.001**
Hémodynamique instable	**13.6**	**5**	**<.001**
FE	**31.4±19.2**	**40.2±19.9**	**<.001**
Nombre atteinte coronaire	1.6±0.8	1.6±0.8	.165
Tronc coronaire	**2.5**	**1.8**	**.032**
IVA prox **CX**	**44.3** **34.7**	**36.1** **40**	**<.001** **.022**
Stenting	73.9	78.5	.018
CPBIA	**26.7**	**6.4**	**<.001**

Early sustained ventricular arrhythmias complicating acute myocardial infarction. Piccini JP. Et al. Am J Med 2008; 121: 797-804.

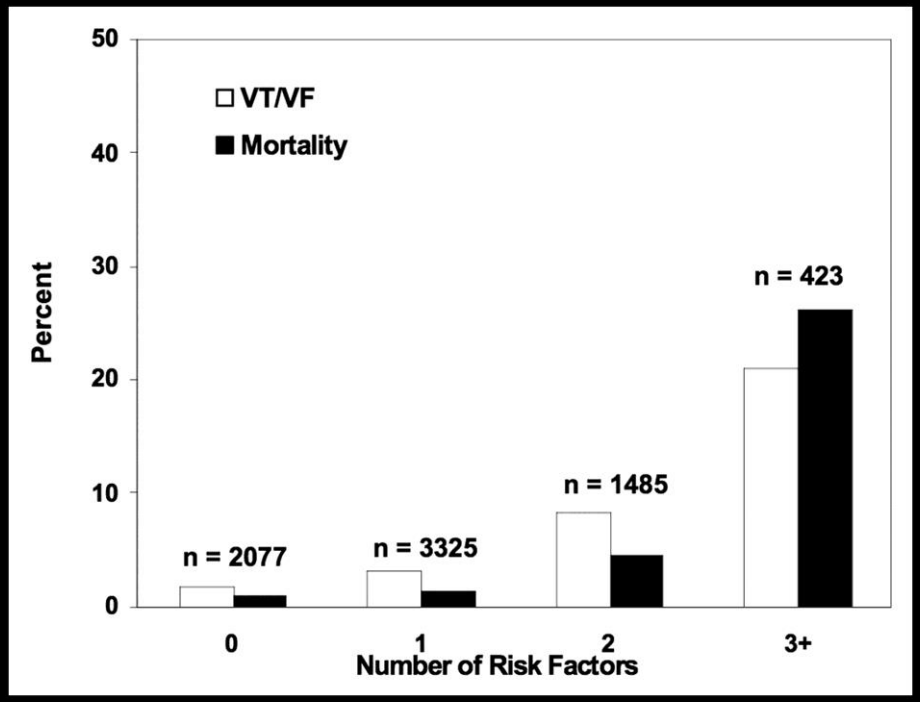
Facteurs intra hospitaliers	TV/FV n=472	Pas d'évènements ventriculaires n=8543	P
MACE (%)	**16.3**	**3.7**	**<.001**
Durée de séjour	**9.5±12**	**6.2±11**	**<.001**
Ré-occlusion	0.4	0.9	0.27
Thrombose de stent	1.3	0.9	.41
IDM	1.3	1.1	.5
AVC	0.4	0.7	.5
dialyse	0	0.4	.17
pontage	1.7	1.1	.12

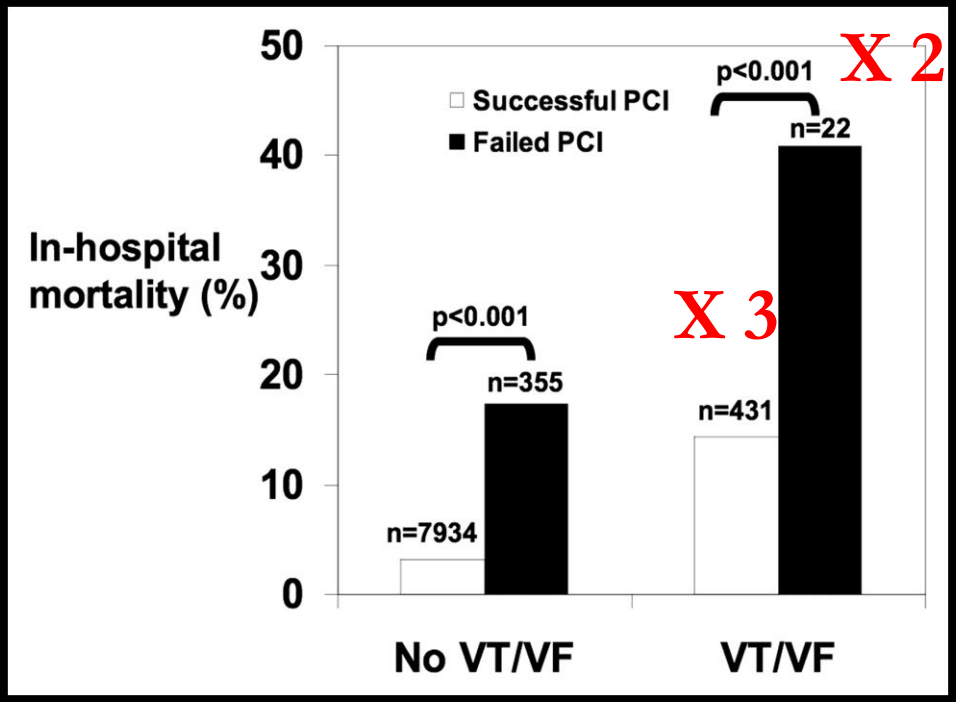
MACE: major cardiovascular events

Early sustained ventricular arrhythmias complicating acute myocardial infarction. Piccini JP. Et al. Am J Med 2008; 121: 797-804.

Facteurs indépendants Troubles rythmiques ventriculaires	Wald	OR	P
HTA	3.98	0.81 (0.66-1)	0.046
Atteinte CX	4.07	0.80 (0.65-0.99)	0.044
Diabète	12.72	0.57 (0.42-0.78)	<.001
FE	32.61	0.93 (0.91-0.93)	<.001
Atteinte rénale	6.91	2.58 (1.27-5.23)	.009
Race blanche	7.77	1.73 (1.18-2.55)	.005
IDM > 6H	11.97	1.46 (1.18-1.81)	.001
Insuffisance cardiaque	69.36	2.86 (2.24-3.67)	<.001
Choc cardiogénique	81	4.10 (3.02-5.58)	<.001

Early sustained ventricular arrhythmias complicating acute myocardial infarction. Piccini JP. et al. Am J Med 2008; 121: 797-804.





4 Facteurs de risque indépendants

- insuffisance rénale
- FE<40%
- choc cardiogénique
- insuffisance cardiaque

Prévalence des troubles rythmiques ventriculaires à la phase aiguë de l'infarctus

Études		N	Arythmies ventriculaires	Facteurs prédictifs	Mortalité tardive
Étude GUSTO I thrombolyse	Circulation J 1998	40895	10.2%	▪ Age; HTA ▪ ATCD IDM ▪ Localisation antérieure ▪ FE; TIMI flow ▪ Stade KILLIP	TV oui FV non
Étude GUSTO III thrombolyse	Am J Cardiol 2003	15042	7.4%	▪ PA basse ▪ Lidocaine avant randomisation ▪ KILLIP ▪ Age ; FC; BB ▪ Délai thrombolyse	TV oui FV oui
Étude PAMI angioplastie	JACC 2004	3065	4.3%	▪ Tabac; Absence BB ▪ Délai revascuarisation ▪ Thrombolyse avant ACT ▪ TIMI flow ▪ IDM inférieur	non biais
Piccini JP	Am J Med 2008	9015	5.2%	▪ Choc cardiogénique ▪ Délai revascularisation ▪ FE; IC	oui
Mehta RH	JAMA 2009	5745	5.7%	▪ PA ▪ TIMI flow ▪ BB absence premières 24H ▪ Régression ST > 70%	oui

Traitement antiarythmique pour les troubles rythmiques ventriculaires lors d'un syndrome coronarien aiguë

Evaluation des études

- Biais de sélection et de suivi
- Plusieurs schémas thérapeutiques
- Faibles échantillons
- End points variables
- **Facteurs évidents:**
  - cardioversion
  - reperfusion
  - béta-bloquants; IEC;
  - correction des troubles métaboliques

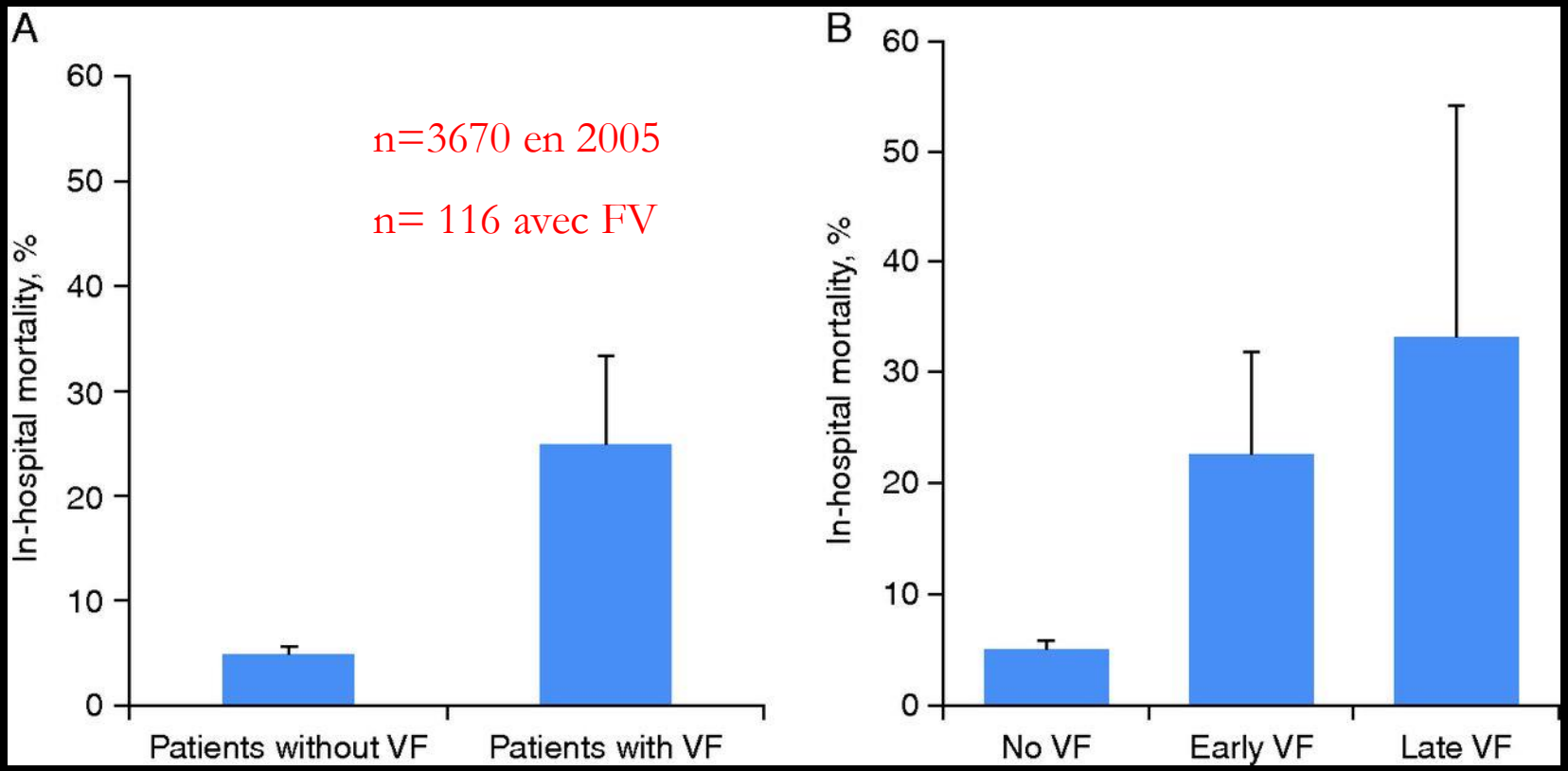
Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the joint EHRA, ACCA and EAPCI Task force. Europace 2014

Recommandations pour une évaluation des patients à plus haut risque d'évènements rythmiques lors d'un syndrome coronarien aiguë

1. Hospitalisation tardive après le début des symptômes
1. Revascularisation incomplète
2. Présence d'un substrat avant l'événement coronarien
3. Patients avec complications
4. FE

Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the joint EHRA, ACCA and EAPCI Task force. Europace 2014

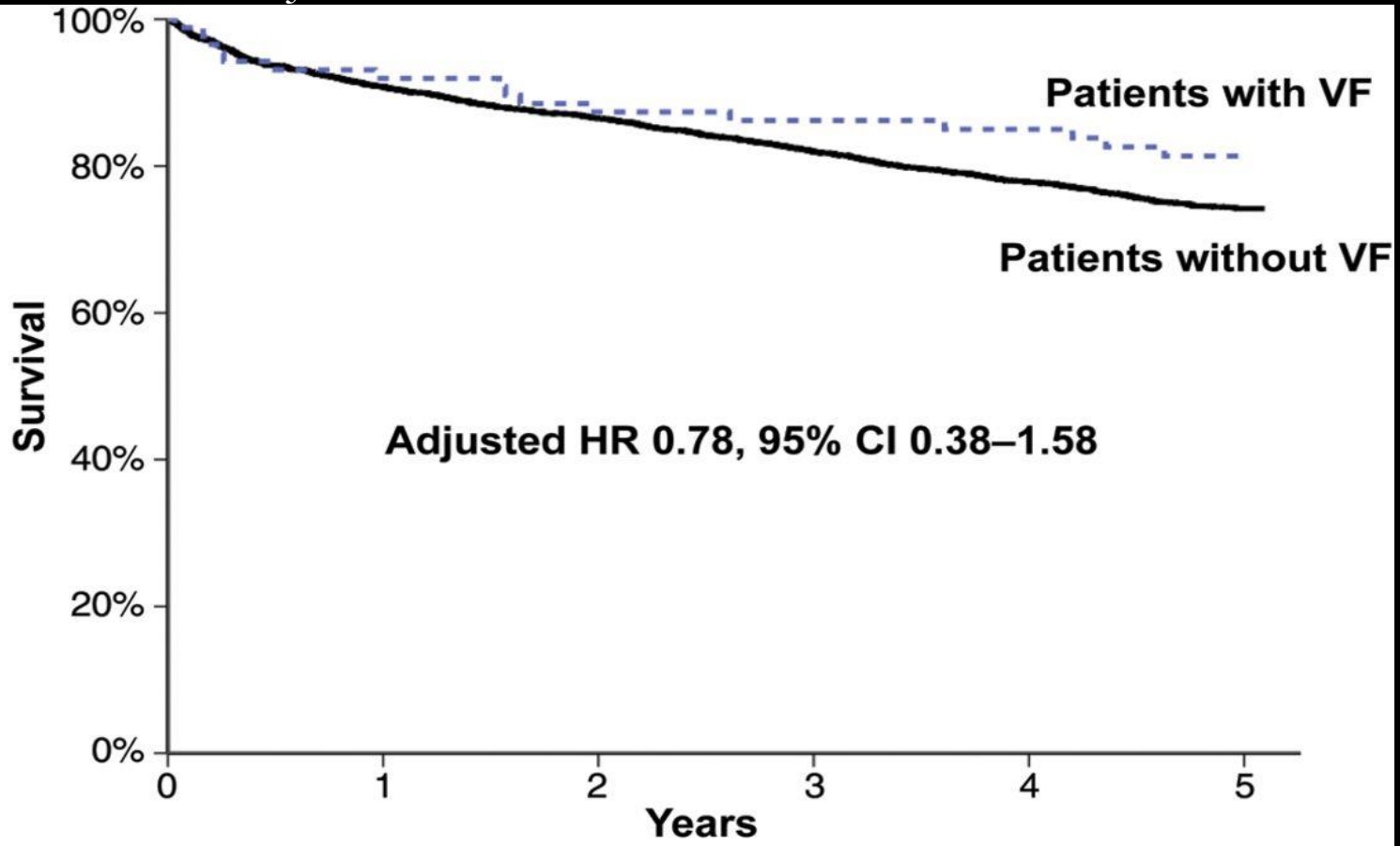
Incidence of sudden cardiac death after ventricular fibrillation complicating acute myocardial infarction: a 5-year cause-of-death analysis of the FAST-MI 2005 registry. Bougoin et al. Eur Heart J 2014



In-hospital mortality according to occurrence of ventricular fibrillation.

Wulfran Bougouin et al. Eur Heart J 2014;35:116-122

Incidence of sudden cardiac death after ventricular fibrillation complicating acute myocardial infarction: a 5-year cause-of-death analysis of the FAST-MI 2005 registry.
Bougoin W et al. Eur Heart J 2014



Number at risk	Discharge	1 year	2 years	3 years	4 years	5 years
Patients with VF	87	80	76	74	71	55
Patients without VF	3376	3053	2873	2705	2526	1787

Long-term 5 years mortality according to occurrence of ventricular fibrillation.

ARREST Study. Amiodarone as Compared with Lidocaine for Shock-Resistant Ventricular Fibrillation

Paul Dorian, et al. N Engl J Med 2002; 346:884-890

TABLE 1. CLINICAL CHARACTERISTICS OF THE PATIENTS AND COURSE OF RESUSCITATION BEFORE THE ADMINISTRATION OF AMIODARONE OR LIDOCAINE.*

CHARACTERISTIC	AMIODARONE (N=180)	LIDOCAINE (N=167)
Male sex — no. (%)	136 (76)	136 (81)
Age — yr	68±14	66±13
History of cardiac disease — no. (%)†	110 (61)	99 (59)
Witnessed arrest — no. (%)‡	136 (76)	130 (78)
CPR by bystander — no. (%)†	47 (26)	47 (28)
Initial cardiac rhythm — no. (%)		
Ventricular fibrillation	140 (78)	132 (79)
Pulseless ventricular tachycardia	1 (1)	2 (1)
Asystole converting to ventricular fibrillation	20 (11)	16 (10)
Pulseless electrical activity converting to ventricular fibrillation	14 (8)	11 (7)
Rhythm at the time of drug administration — no. (%)		
Ventricular fibrillation	163 (91)	156 (93)
Pulseless ventricular tachycardia	3 (2)	4 (2)
Other pulseless rhythm	11 (6)	7 (4)
Supraventricular rhythm	3 (2)	1 (1)
Time from dispatch to response or procedure — min		
First shock§		
Mean ±SD	8±3	9±4
Median	8	9
Intubation		
Mean ±SD	11±4	11±4
Median	11	11
Intravenous access		
Mean ±SD	13±4	14±4
Median	13	13
Administration of study drug¶		
Mean ±SD	25±8	24±7
Median	24	24

*Plus–minus values are means ±SD. There were no significant differences between the amiodarone and lidocaine groups. CPR denotes cardiopulmonary resuscitation.

†Data were available for 148 amiodarone recipients and 131 lidocaine recipients.

‡Data were available for 179 amiodarone recipients and 164 lidocaine recipients.

§The data are from patients whose initial rhythm was ventricular fibrillation or pulseless ventricular tachycardia and do not include data from patients who received a shock only from a basic life-support crew (69 treated with amiodarone and 72 treated with lidocaine).

¶Data were available for 162 amiodarone recipients and 148 lidocaine recipients.

TABLE 2. ODDS RATIOS FOR SURVIVAL TO HOSPITAL ADMISSION ACCORDING TO SELECTED FACTORS, FROM THE UNADJUSTED AND ADJUSTED ANALYSES.*

FACTOR	ODDS RATIO FOR SURVIVAL (95% CI)	P VALUE
Unadjusted analysis		
Treatment assignment (amiodarone vs. lidocaine)	2.17 (1.21–3.83)	0.009
Time from dispatch to drug administration (per 1-min increase)	0.91 (0.86–0.96)	<0.001
Transient return of spontaneous circulation before drug administration (yes vs. no)	3.6 (1.7–7.3)	<0.001
Initial rhythm (VF or pulseless ventricular tachycardia vs. asystole or pulseless electrical activity)	2.27 (0.99–5.23)	0.05
Witnessed arrest (yes vs. no)	2.10 (0.95–4.63)	0.07
Age (per additional yr)	0.999 (0.978–1.019)	0.90
Sex (male vs. female)	0.73 (0.39–1.38)	0.34
History of heart disease (yes vs. no)	1.23 (0.59–2.56)	0.58
No. of shocks (per additional shock)	0.86 (0.73–1.02)	0.08
CPR by bystander (yes vs. no)	1.41 (0.78–2.56)	0.26
Defibrillation by basic life-support crew (yes vs. no)	1.34 (0.51–3.57)	0.55
Time to first defibrillation (per 1-min increase)†	1.02 (0.91–1.16)	0.71
Adjusted analysis‡		
Treatment assignment (amiodarone vs. lidocaine)	2.49 (1.28–4.85)	0.007
Time from dispatch to drug administration (per 1-min increase)	0.88 (0.83–0.93)	<0.001
Transient return of spontaneous circulation before drug administration (yes vs. no)	5.93 (2.46–14.26)	<0.001

*CI denotes confidence interval, VF ventricular fibrillation, and CPR cardiopulmonary resuscitation.

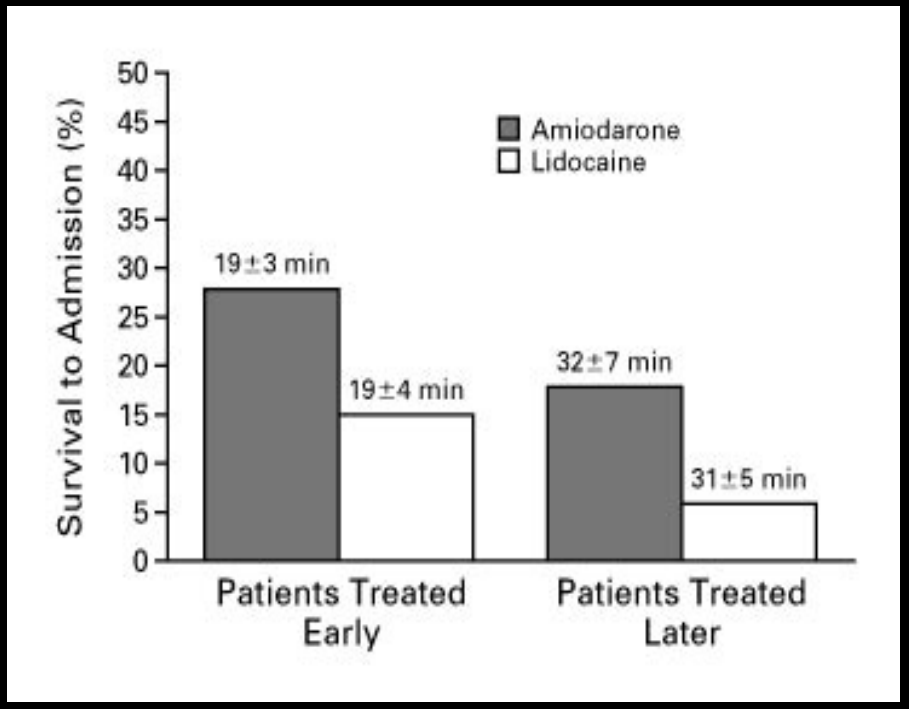
†The calculation was based on the interval from dispatch to first defibrillation by an advanced life-support crew in patients whose initial rhythm was ventricular fibrillation.

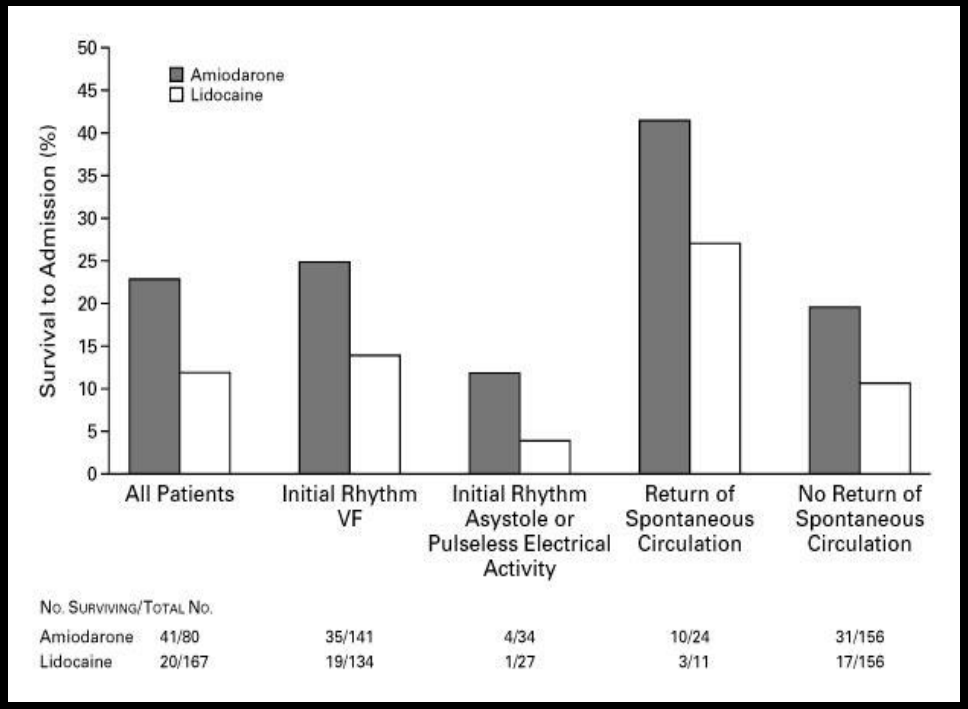
‡In the adjusted analysis, the odds ratios were adjusted for all factors that could potentially affect survival to hospital admission for which P<0.02 in the unadjusted analysis.

- Amiodarone IV 5mg/kg
- Lidocaine IV 1.5 mg/kg

ARREST Study. Amiodarone as Compared with Lidocaine for Shock-Resistant Ventricular Fibrillation

Paul Dorian, et al. N Engl J Med 2002; 346:884-890





No. Surviving/Total No.					
Amiodarone	41/80	35/141	4/34	10/24	31/156
Lidocaine	20/167	19/134	1/27	3/11	17/156

Amiodarone, Lidocaine, or Placebo in Out-of-Hospital Cardiac Arrest

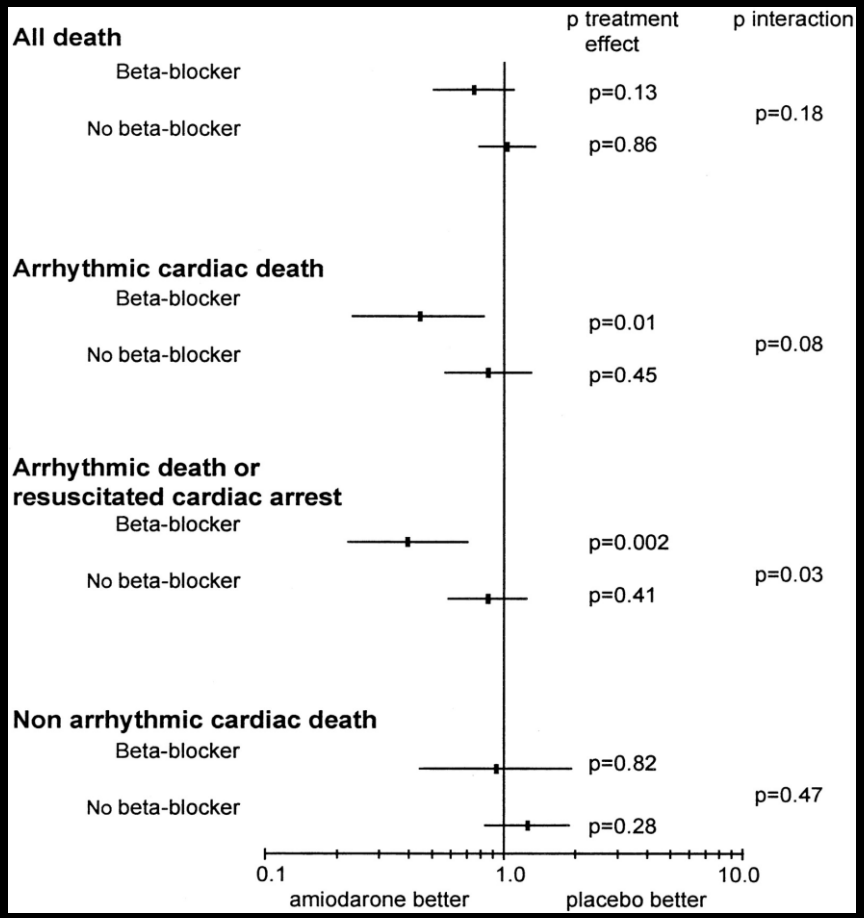
Table 3. Outcomes According to Trial Group in the Per-Protocol Population.*

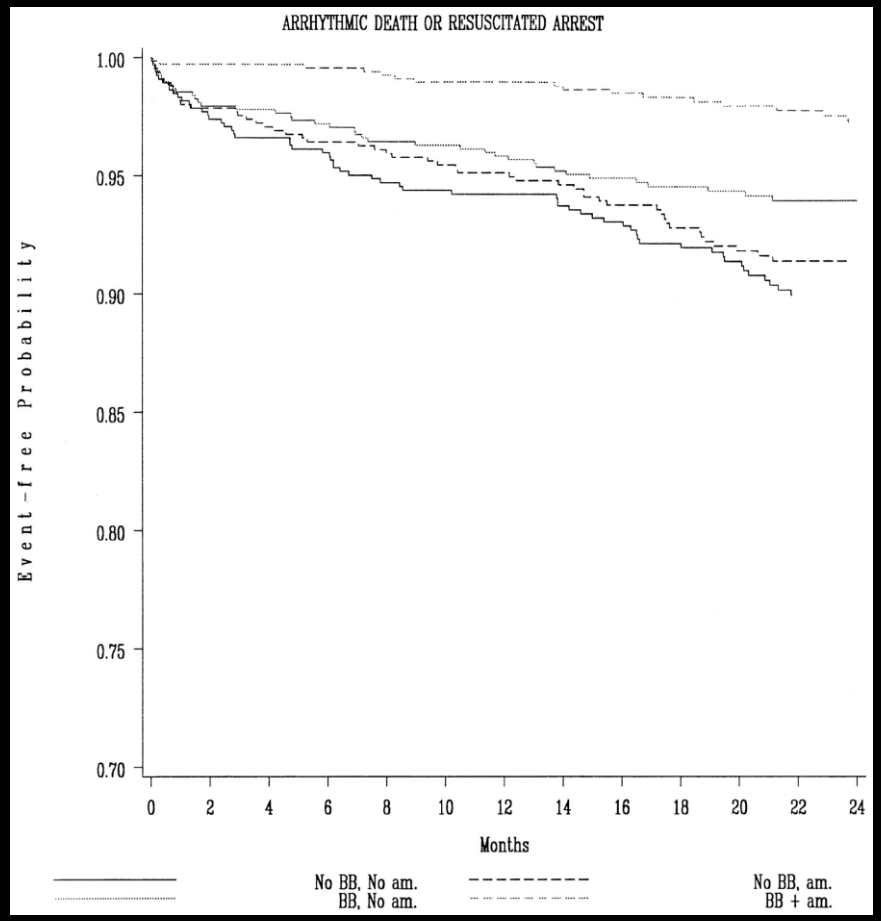
Outcome	Amiodarone (N=974)	Lidocaine (N=993)	Placebo (N=1059)	Amiodarone vs. Placebo		Lidocaine vs. Placebo		Amiodarone vs. Lidocaine	
				Difference (95% CI) *percentage points*	P Value	Difference (95% CI) *percentage points*	P Value	Difference (95% CI) *percentage points*	P Value
Primary outcome: survival to discharge — no./total no. (%)†	237/970 (24.4)	233/985 (23.7)	222/1056 (21.0)	3.2 (−0.4 to 7.0)	0.08	2.6 (−1.0 to 6.3)	0.16	0.7 (−3.2 to 4.7)	0.70
Secondary outcome: modified Rankin score ≤3 — no./total no. (%)‡	182/967 (18.8)	172/984 (17.5)	175/1055 (16.6)	2.2 (−1.1 to 5.6)	0.19	0.9 (−2.4 to 4.2)	0.59	1.3 (−2.1 to 4.8)	0.44
Mechanistic (exploratory) outcomes									
Return of spontaneous circulation at ED arrival — no./total no. (%)	350/974 (35.9)	396/992 (39.9)	366/1059 (34.6)	1.4 (−2.8 to 5.5)	0.52	5.4 (1.2 to 9.5)	0.01	−4.0 (−8.3 to 0.3)	0.07
Admitted to hospital — no. (%)	445 (45.7)	467 (47.0)	420 (39.7)	6.0 (1.7 to 10.3)	0.01	7.4 (3.1 to 11.6)	<0.001	−1.3 (−5.7 to 3.1)	0.55
Modified Rankin score in all patients‡	5.0±1.9	5.1±1.8	5.2±1.8	−0.14 (−0.30 to 0.02)	0.09	−0.06 (−0.22 to 0.10)	0.45	−0.08 (−0.24 to 0.08)	0.34
Modified Rankin score in survivors‡	2.0±2.7	2.2±2.7	2.0±2.6						
Distribution of modified Rankin scores — no./total no. (%)‡									
0	60/966 (6.2)	49/981 (5.0)	55/1053 (5.2)						
1	47/966 (4.9)	37/981 (3.8)	39/1053 (3.7)						
2	41/966 (4.2)	46/981 (4.7)	40/1053 (3.8)						
3	34/966 (3.5)	37/981 (3.8)	41/1053 (3.9)						
4	31/966 (3.2)	36/981 (3.7)	27/1053 (2.6)						
5	21/966 (2.2)	24/981 (2.4)	18/1053 (1.7)						
6	732/966 (75.8)	752/981 (76.7)	833/1053 (79.1)						

* CI denotes confidence interval, and ED emergency department.
† The difference and 95% CI were adjusted for sequential monitoring.
‡ Scores on the modified Rankin scale range from 0 (no symptoms) to 6 (death). A score of 3 or less indicates the ability to conduct daily activities independently or with minimal assistance.

Kudenchuk PJ et al. N Engl J Med 2016; 374: 1711-1722.

Amiodarone Interaction With β-Blockers Analysis of the Merged EMIAT (European Myocardial Infarct Amiodarone Trial) and CAMIAT (Canadian Amiodarone Myocardial Infarction Trial) Databases Relative risks for selected outcomes.





Intérêt pour la prévention des arythmies ventriculaires en association avec les BB

Florent Boutitie et al. Circulation. 1999;99:2268-2275

Traitement des tachycardies ventriculaires

- Tolérance clinique
  - Instable ➔ cardioversion
  - Stable traitement soit par drogues **ou** cardioversion
- Présence or absence de dysfonction ventriculaire gauche détermine l'AA:
  - Amiodarone 150 mg I.V. sur 10 minutes avec ensuite 6 ampoules sur 24 heures SAP IV
  - Xylocaine IV 1.5 mg/Kg (IV lent 5 minutes) puis à la SAP 1 à 2 g sur 24 heures

Recommandations sur le traitement AA à la phase aiguë de l'infarctus

1. Prévention primaire non recommandée chez les patients à la phase aiguë en l'absence de troubles rythmiques

2. TV/FV malgré la revascularisation:
   - BB; correction électrolytiques;
   - Sédation
   - Cardioversion/FV
   - Stimulation endocavitaire/TV
   - Amiodarone IV
   - Lidocaïne IV

3. **Orage rythmique:**
   - Après revascularisation
   - ?????????????????????

Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the joint EHRA, ACCA and EAPCI Task force. Europace 2014

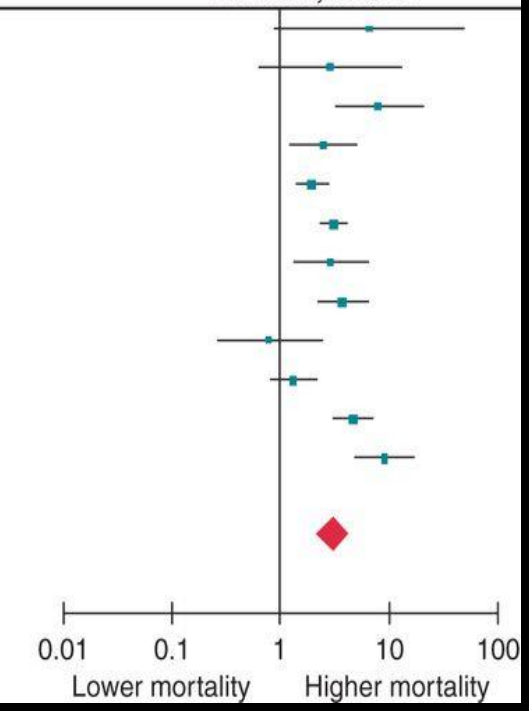
Orage rythmique par TV/FV

- Définition orage rythmique:
  - ≥ 3 épisodes TV/FV sur 24 H
  - TV ou FV incessantes
- Facteurs favorisants:
  - Ischémie aiguë
  - Anomalies électrolytiques
  - Dysfonction VG
  - Choc cardiogénique
  - Canalopathies méconnues
- Substrat:
  - TV monomorphes
  - TV polymorphes
  - FV

Effet orage rythmique sur la mortalité totale.

Study or subgroup	Electrical storm Events	Total	No Electrical storm Events	Total	Weight	Risk ratio Random, 95% CI
Fries *et al.* 1997	10	34	1	23	2.5%	6.76 [0.93, 49.31]
Credner *et al.* 1998	2	14	6	122	3.8%	2.90 [0.65, 13.04]
Bansch *et al.* 2000	16	30	5	76	6.9%	8.11 [3.26, 20.16]
Greene *et al.* 2000	10	40	18	182	8.6%	2.53 [1.26, 5.06]
Exner *et al.* 2001	34	90	69	367	11.5%	2.01 [1.43, 2.82]
Verma *et al.* 2004	57	208	159	1796	12.0%	3.10 [2.37, 4.04]
Stuber *et al.* 2005	11	51	12	163	8.1%	2.93 [1.38, 6.24]
Gatzoulis *et al.* 2005	17	32	19	137	10.0%	3.83 [2.26, 6.50]
Hohnloser *et al.* 2006	4	148	16	485	5.8%	0.82 [0.28, 2.41]
Brigadieau *et al.* 2006	25	123	28	184	10.3%	1.34 [0.82, 2.18]
Sesselberg *et al.* 2007	15	27	82	692	11.1%	4.69 [3.16, 6.95]
Nordbeck *et al.* 2010	13	40	24	684	9.4%	9.26 [5.11, 16.79]
Total (95% CI)		**837**		**4911**	**100.0%**	**3.15 [2.22, 4.48]**
Total events	213		439			

Heterogeneity: $\tau^2 = 0.25$; $\chi^2 = 47.93$, df =11 ($P < 0.00001$); $I^2 = 77\%$



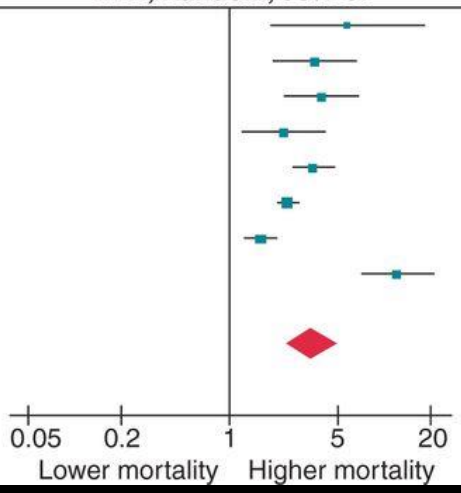
Federico Guerra et al. Europace 2014;16:347-353

Effet de l'orage rythmique sur un critère combiné mortalité totale, transplantation cardiaque, décompensation cardiaque et choc cardiogénique

Study or subgroup	Electrical storm Events	Total	No Electrical storm Events	Total	Weight	Risk ratio M-H, Random, 95% CI	Year
Credner *et al.* 1998	4	14	6	122	6.7%	5.81 [1.86, 18.13]	1998
Greene *et al.* 2000	14	40	18	182	11.5%	3.54 [1.93, 6.51]	2005
Bansch *et al.* 2000	20	30	13	76	12.1%	3.90 [2.24, 6.79]	2000
Stuber *et al.* 2005	14	51	20	163	11.5%	2.24 [1.22, 4.10]	2005
Gatzoulis *et al.* 2005	29	32	36	137	14.7%	3.45 [2.55, 4.66]	2005
Hohnloser *et al.* 2006	112	148	154	485	15.8%	2.38 [2.03, 2.79]	2006
Brigadieau *et al.* 2006	77	123	72	184	15.3%	1.60 [1.28, 2.01]	2006
Nordbeck *et al.* 2010	17	40	24	684	12.3%	12.11 [7.11, 20.65]	2010
Total (95% CI)		**478**		**2033**	**100.0%**	**3.39 [2.31, 4.97]**	
Total events	287		343				

Heterogeneity: $\tau^2 = 0.24$; $\chi^2 = 59.35$, df = 7 ($P < 0.00001$); $I^2 = 88\%$

Test for overall effect: $Z = 6.23$ ($P < 0.00001$)

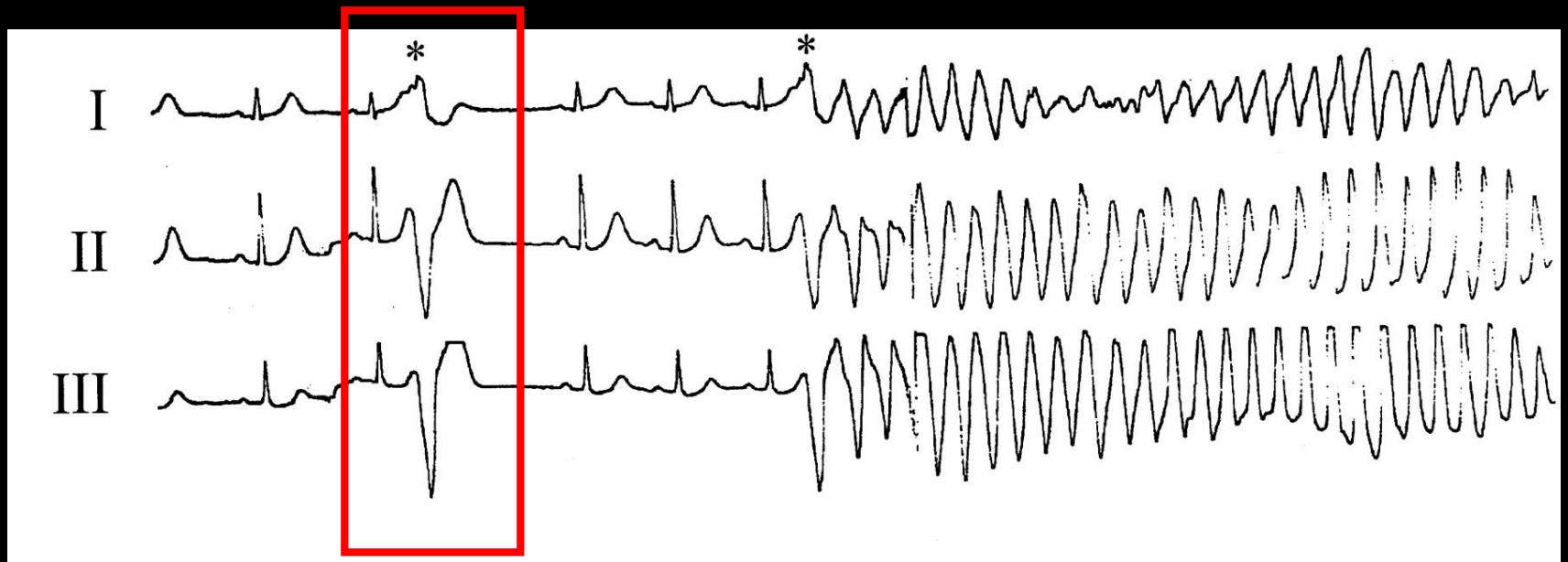


Federico Guerra et al. Europace 2014;16:347-353

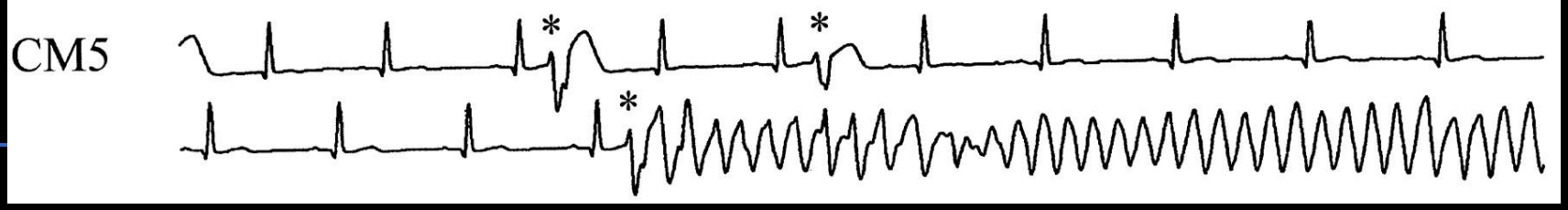
Algorithme prise en charge orage rythmique par TV/FV

- amiodarone
  - 150 mg IV sur 10 minutes jusqu'à 2.2 g/24H
  - ou PS 6A sur 24H
- BB
  - Propanolol 0.15 mg/kg sur 10 minutes
  - Metoprolol 5 mg IV / 5 min jusqu'à 3 doses
- Sédation
  - Contexte ishémique: lidocaine bolus 1g/kg IV avec bolus répété de 0.5 mg/kg jus'à 3 mg/kg
  - PS Lidocaine: 20 µg/kg/min
- Radiofréquence
- Assistance circulatoire

FV déclenchée par ESV



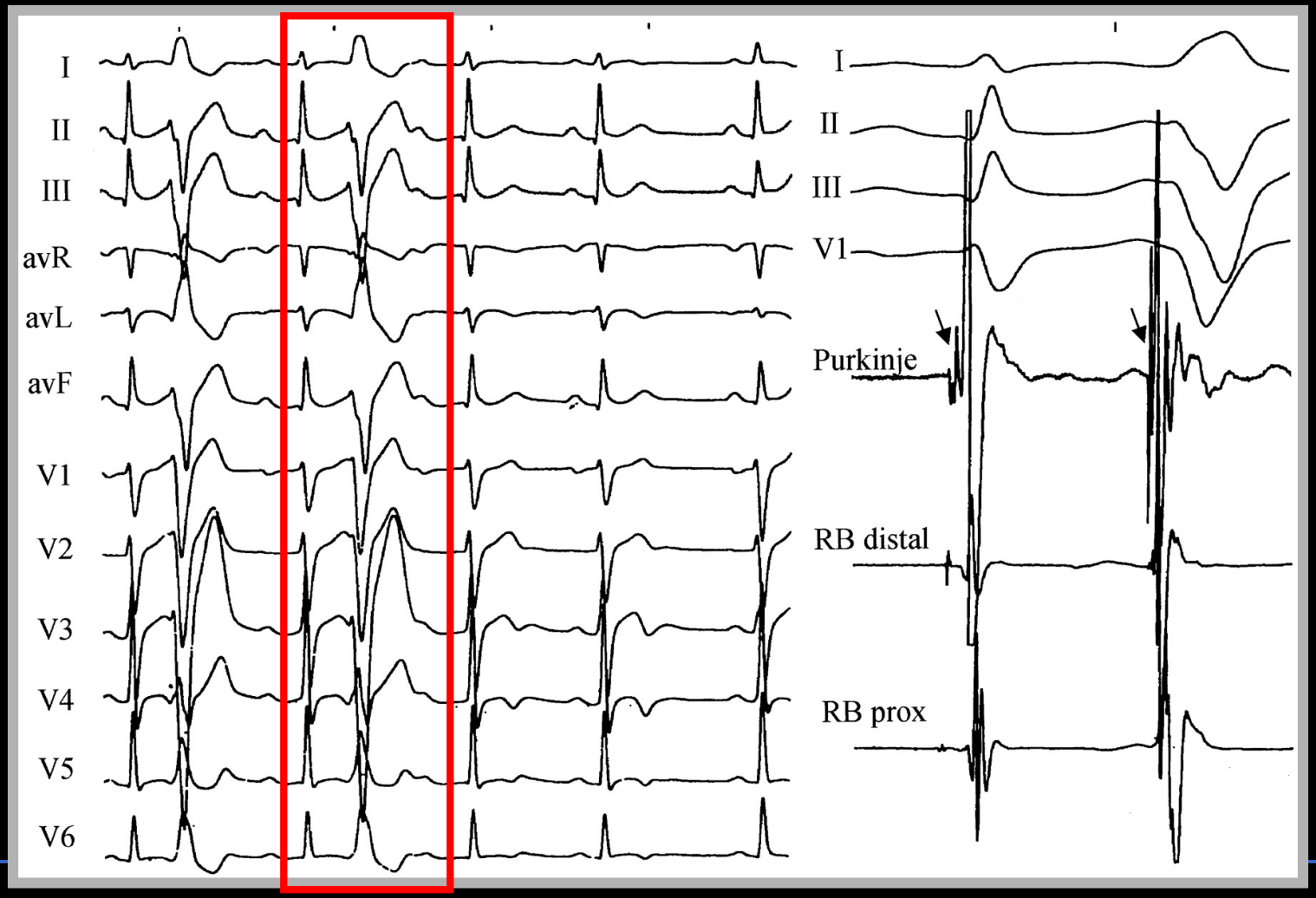
Examples of VF initiation by premature beats later found to originate from the right (top) or left (bottom) ventricle



Haissaguerre, M. et al. Circulation 2002;106:962-967

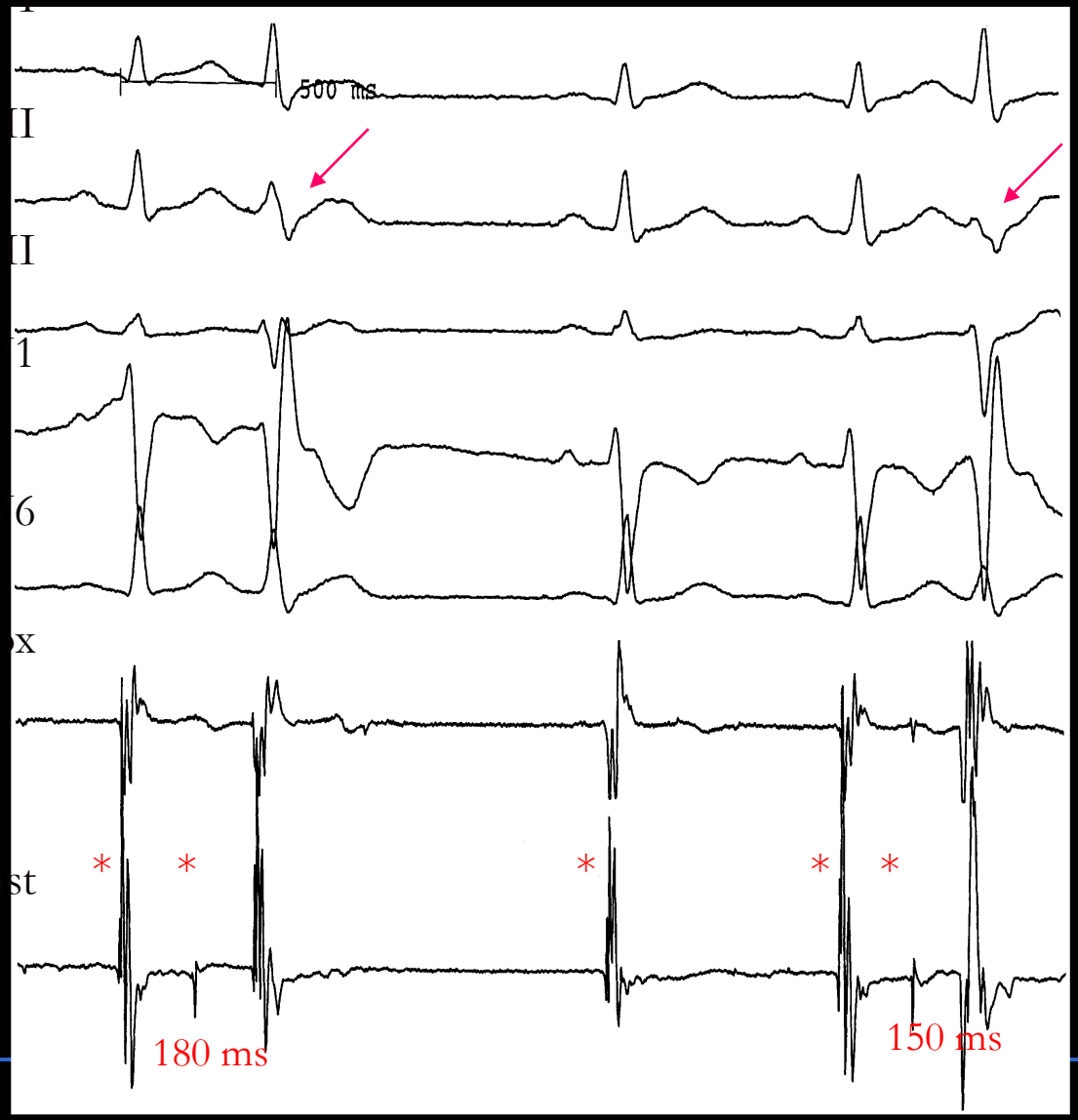
Potentiels de purkinje

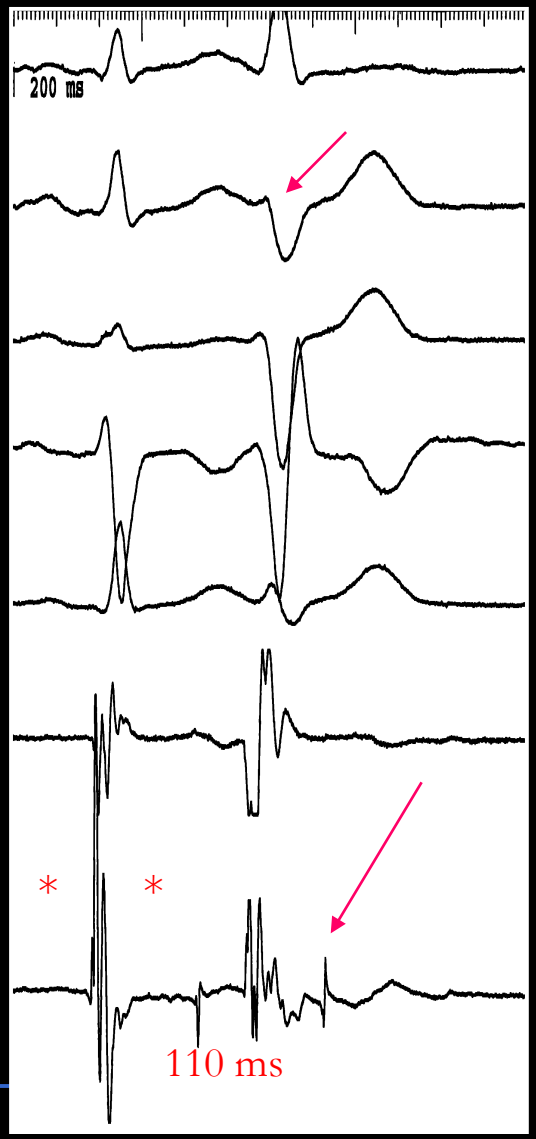
Examples of VF initiation by premature beats later found to originate from the right (top) or left (bottom) ventricle



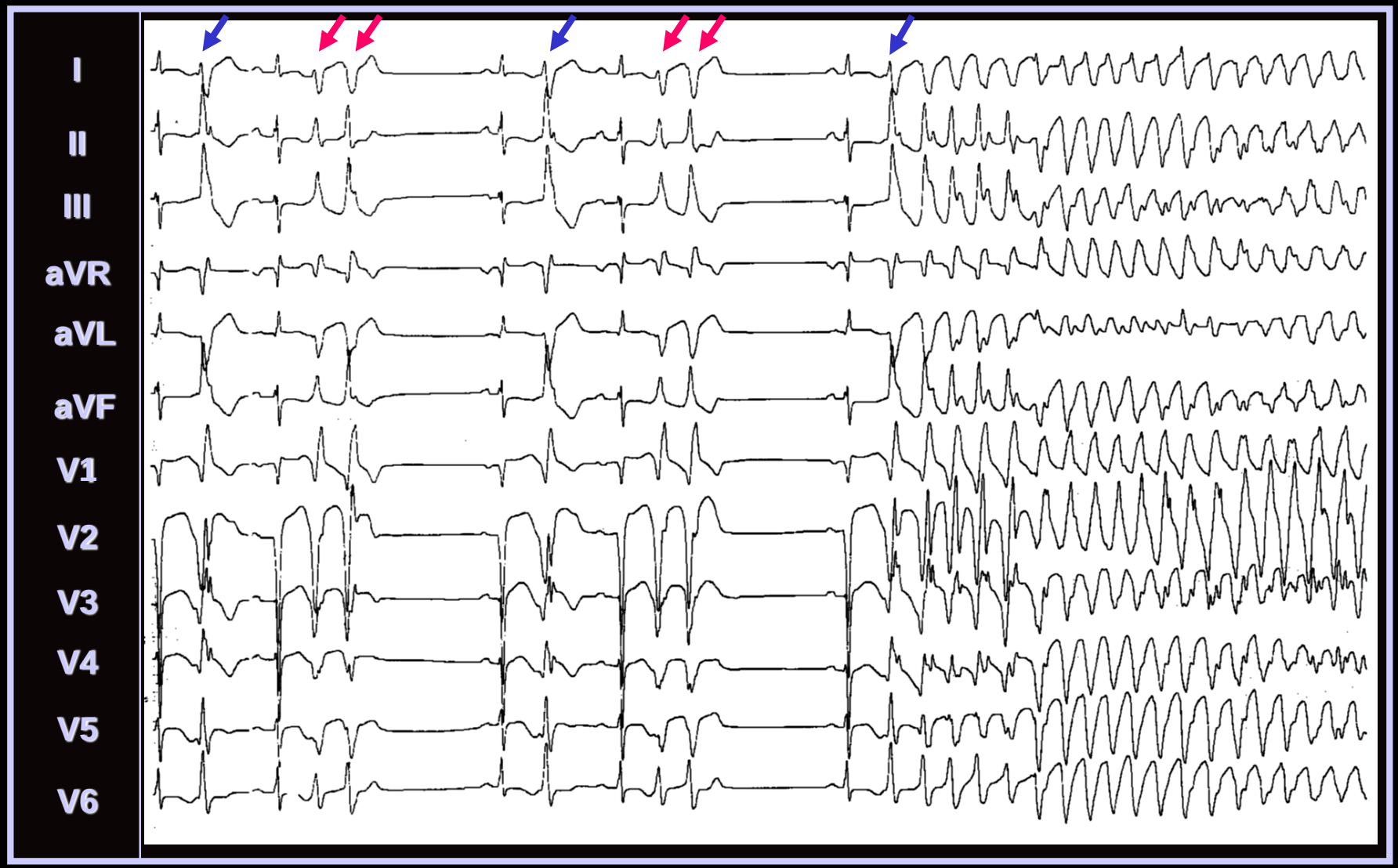
Haissaguerre, M. et al. Circulation 2002;106:962-967

ESV Purkinje gauche avec temps de conduction variable





FV récidivantes à J15 d'un IDM antérieur



Catheter Ablation for the Treatment of Electrical Storm in Patients With Implantable Cardioverter-Defibrillators

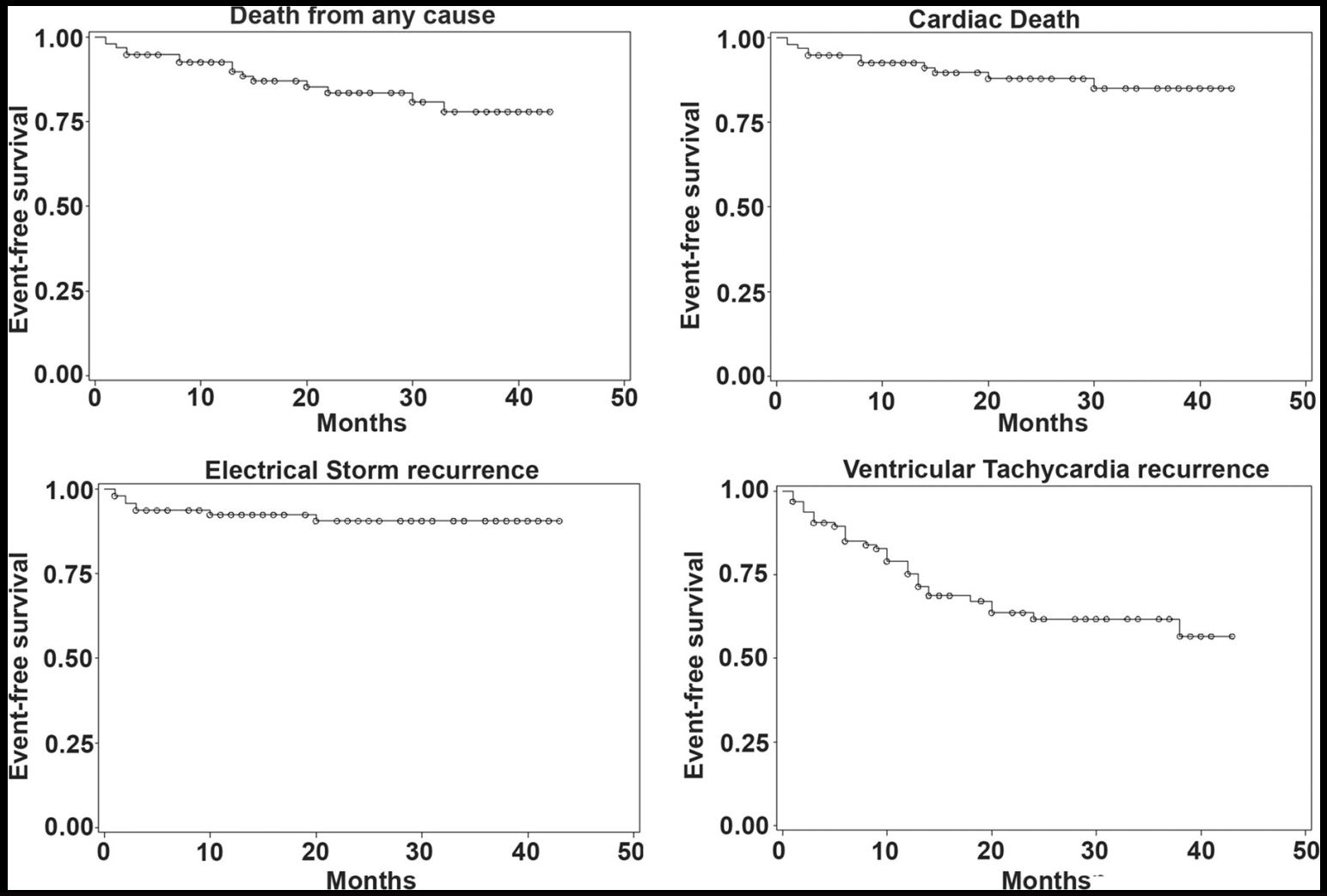
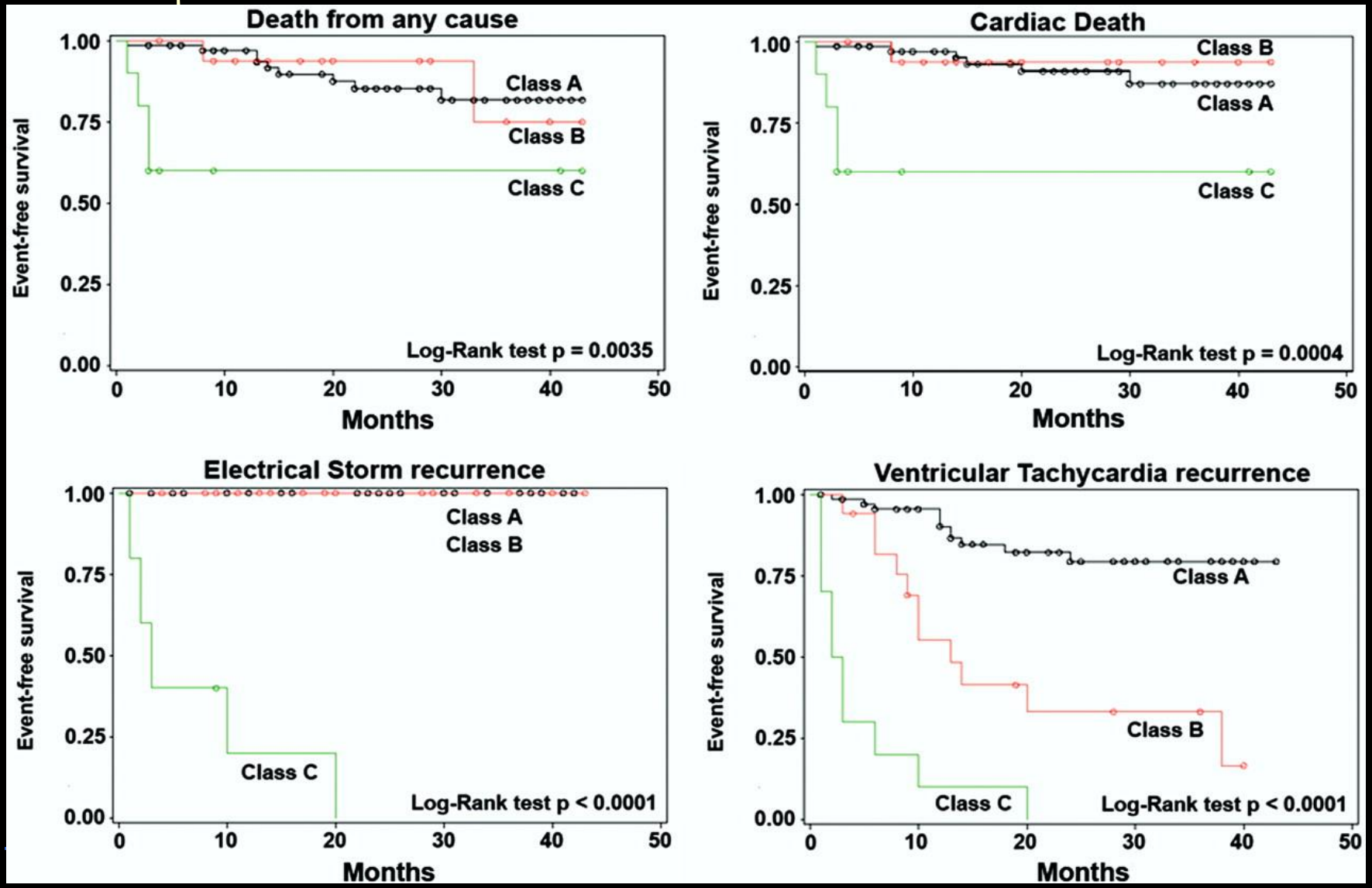


Figure 1. Kaplan-Meier event-free survival estimates in patient population during follow up.

Corrado Carbucicchio et al. Circulation. 2008; 117: 462-469

Catheter Ablation for the Treatment of Electrical Storm in Patients With Implantable Cardioverter-Defibrillators

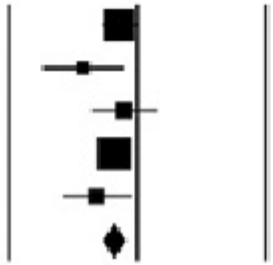


Corrado Carbucicchio et al. Circulation. 2008; 117: 462-469

Résultats de l'ablation méta-analyse

A

Study	No of VT recurrences / Total patients: Ablation	Control	Relative risk and 95% CI	p-Value	Weight %
Kuck et al, 2010	26 / 52	38 / 55	0.72 (0.52,1.00)	0.051	31.3
Reddy et al, 2007	8 / 64	21 / 64	0.38 (0.18, 0.80)	0.010	17.8
Schreieck et al, 2004	9 / 19	12 / 20	0.79 (0.44,1.43)	0.435	9.9
Epstein et al, 1998	36 / 73	24 / 32	0.66 (0.48,0.89)	0.007	28.3
Niwano et al, 2008	14 / 58	10 / 20	0.48 (0.26,0.91)	0.024	12.6
Overall (95% CI)			0.62 (0.51,0.76)	0.000	

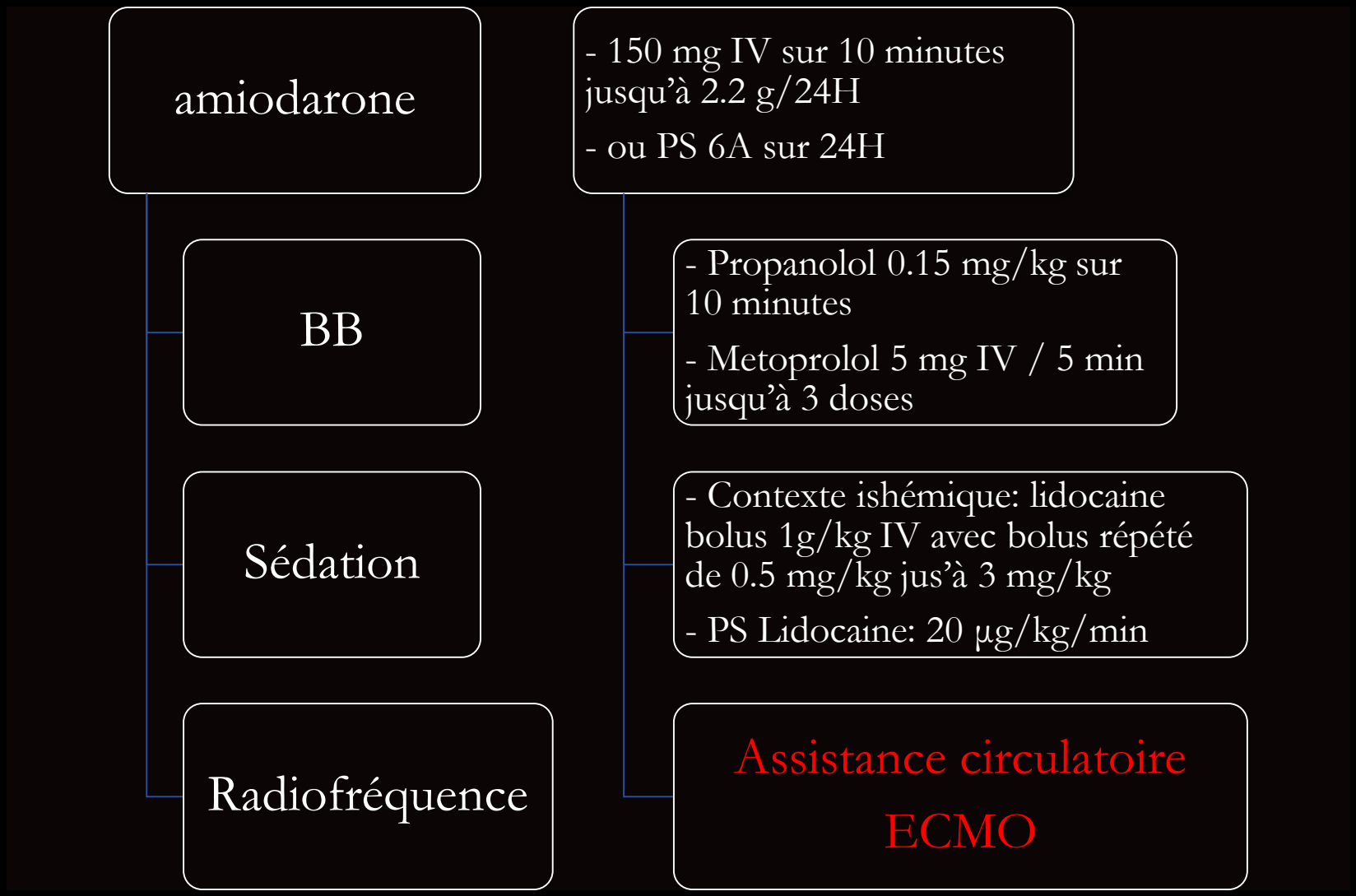


- 48%

0.1 1 10

Favors Ablation Favors Control

Algorithme prise en charge orage rythmique par TV/FV



Les autres troubles du rythme

Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the loint EHRA, ACCA and EAPCI Task force. Europace 2014

Prévalence des troubles rythmiques au cours ou au décours immédiat de l'IDM

Type	%
Bradycardie sinusale (<50 b.p.m)	28%
TVNS RIVA	26% 15-42%
Tachycardie sinusale	22%
Fibrillation atriale	9%
BAV haut degré	5-10%
TV soutenue	2-4%
FV	2-5%

Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the loint EHRA, ACCA and EAPCI Task force. Europace 2014

Prévalence de la fibrillation atriale à la phase aiguë IDM

Études	Année	Incidence FA ≈ 10%	F. Prédictifs après IDM	Traitement IDM
Wong/GUSTO III	2000	6%	Age, femme; HTA; diabète; IC	thrombolyse
Pizzetti/GISSI III	2001	6.1%	Age >70; femme; HTA; diabète; FC; Killip	thrombolyse
Goldberg	2002	13.2%	Age; HTA; IC	n.a.
Kinjo/OACIS	2003	7.7	Age; sexe féminin; FC > 100; Killip 4	
Lehto/OPTIMAAL	2005	7.2	Age; sexe masculin; Killip;	n.a.
Stenestrand/RISKS-HIA	2005	1.7	n.a.	n.a.
Mac Murray/CAPRICORN	2005	2.7-5.5	n.a.	45% thrombolyse ou angioplastie
Laurent/RICO	2005	7.6	Age; FC; Killip	n.a.
Kobert/VALIANT	2006	12.3	ATCD IDM; IC; age	n.a.
Siu	2007	13.7	Age; sexe féminin	70% thrombolyse 30% angioplastie

Schmitt J et al. Atrial fibrillation in acute myocardial infarction : a sytematic review. Eur Heart J 2009; 30: 1038-45.

Pronostic de la fibrillation atriale à la phase aiguë IDM

Étude	année	OR (95% CI)	Mortalité long-terme
Wong/GUSTO III	2000	1.63	oui
Pizzetti/GISSI III	2001	oui	oui
Goldberg	2002	1.71	1.23
Kinjo/OACIS	2003	no	1.64
Lehto/OPTIMAAL	2005	3.83	1.83
Stenestrand/RISKS-HIA	2005	n.a.	n.a.
Mac Murray/CAPRICORN	2005	n.a.	n.a.
Pedersen/TRACE SCD	2005	n.a.	1.33
Kobert/VALIANT	2006	n.a.	1.32

Schmitt J et al. Atrial fibrillation in acute myocardial infarction : a sytematic review. Eur Heart J 2009; 30: 1038-45.

Recommandations pour le traitement de la fibrillation atriale lors d'un syndrome coronarien aiguë

1. Béta-bloquants ou calcium bloqueurs si FE normale et CI BB
1. Si dysfonction VG: BB ou amiodarone +/- digitaliques
2. Cardioversion si mauvaise tolérance hémodynamique
3. Anticoagulation en fonction du CHA2DS2-VASC score

Gorenek B et al. Cardiac arrhythmias in acute coronary syndromes: position paper from the loint EHRA, ACCA and EAPCI Task force. Europace 2014

Recommandations pour le traitement de la fibrillation atriale lors d'un syndrome coronarien aiguë

CHA2DS2-VASC score

	ACTIVE-A		ACTIVE W	
	Aspirine (%)	Aspirine + clopidogrel (%)	Aspirine + clopidogrel (%)	Warfarine (%)
AVC	3.3	2.4	2.4	1.4%
IDM	0.9	0.7	0.86	0.55
Hémorragies	1.3	2	1.7	1.6

- Score CHADSVASC
- HAS-BLED score
- Choix du stent
- Après 12 mois anticoagulants seuls
- Éviter prasugrel et ticagrelor

- Score CHADSVASC à 1: double AA
- Score CHADSVAC ≥ 2 et SCA: triple association 6 mois qq soit le stent si HAS-BLED bas (≤2)
- Score CHADSVAC ≥ 2 et coronaropathie stable : triple association au moins 1 mois qq soit le stent si HAS-BLED bas (≤2)
- Score CHADSVAC ≥ 2 mais **HAS-BLED haut (≥3):** triple association 1 mois seulement puis NACOS + plavix jusq'à 12 mois qq soit le stent ou le status coronarien

Recommandations ESC 2014 European Hea

POINTS CLES

- Revascularisation
- Identifier les patients à risque de troubles rythmiques ventriculaires (surveillance + ré-évaluation)
- Prise en charge thérapeutique des troubles du rythme en cas de mort subite récupérée
- CAT face à un orage rythmique +++
- Anticoagulation + AA des patients en FA après un infarctus du myocarde