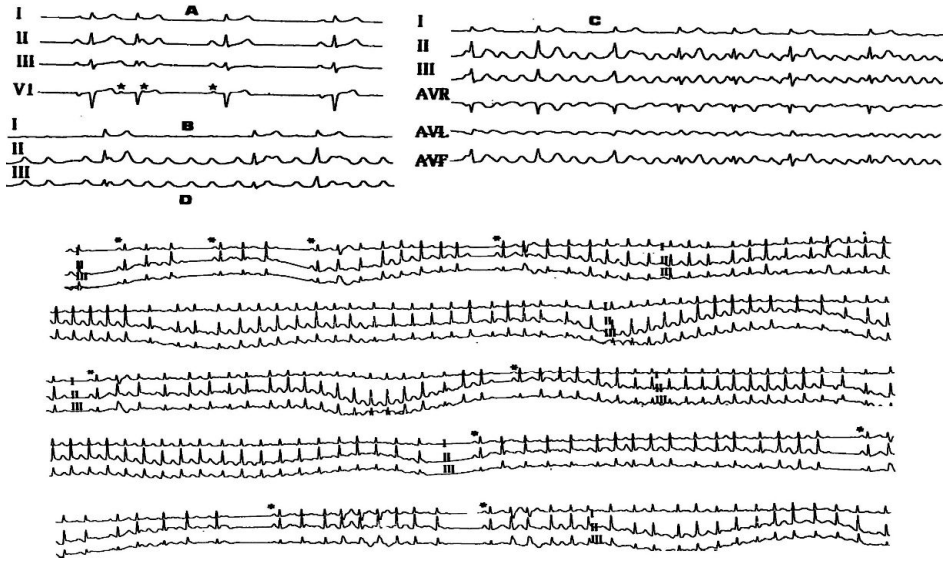
AP-HP.
Hôpitaux universitaires
Henri-Mondor

Gestion des TSV aux urgences (et en consultation externe)

Khaled RAMOUL
Rythmologie
CHU Henri Mondor

La fibrillation atriale

Cas clinique…*classique*



- 68 ans
- HTA/Diabète.
- Palpitations depuis 5j.

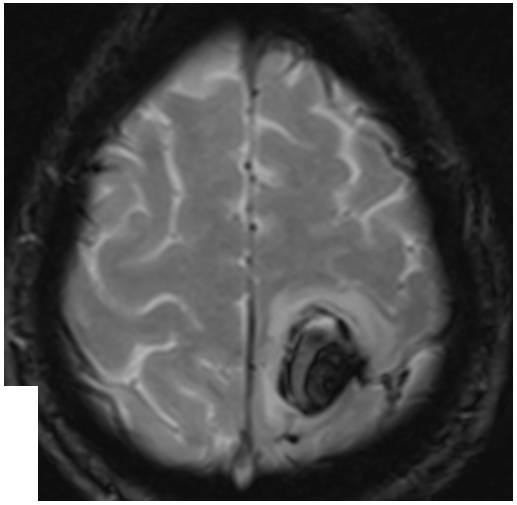
- ECG +++
- B. Biologique.

Urgence ?

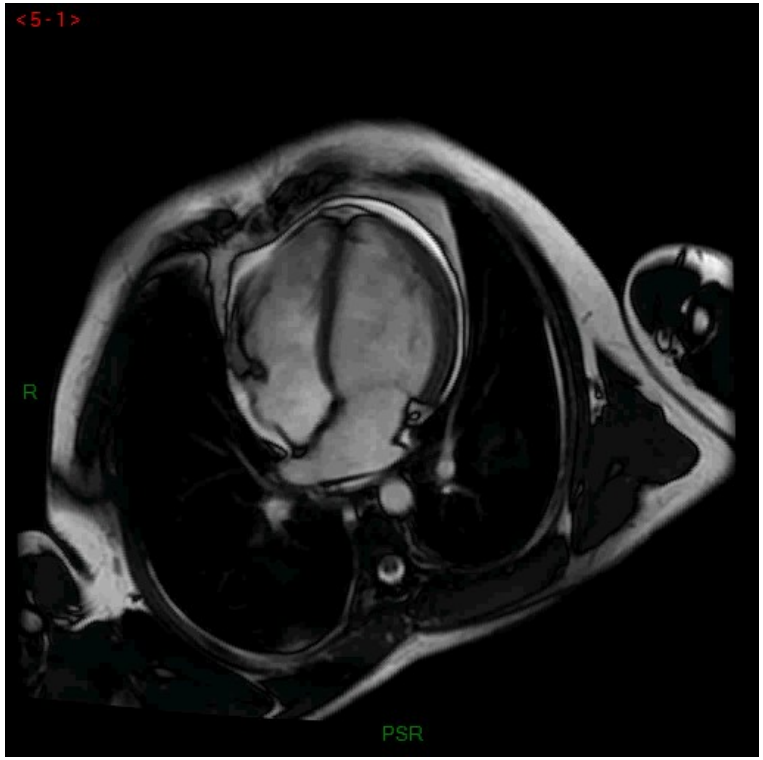
H

Anticoagulation

A



Hémodynamique



Cardiovascular morbidity and mortality associated with atrial fibrillation

Event	Association with AF
Death	Increased mortality, especially cardiovascular mortality due to sudden death, heart failure or stroke.
Stroke	20–30% of all strokes are due to AF. A growing number of patients with stroke are diagnosed with 'silent', paroxysmal AF.
Hospitalizations	10–40% of AF patients are hospitalized every year.
Quality of life	Quality of life is impaired in AF patients independent of other cardiovascular conditions.
Left ventricular dysfunction and heart failure	Left ventricular dysfunction is found in 20–30% of all AF patients. AF causes or aggravates LV dysfunction in many AF patients, while others have completely preserved LV function despite long-standing AF.
Cognitive decline and vascular dementia	Cognitive decline and vascular dementia can develop even in anticoagulated AF patients. Brain white matter lesions are more common in AF patients than in patients without AF.

European Heart Journal - doi:10.1093/eurheartj/ehw210

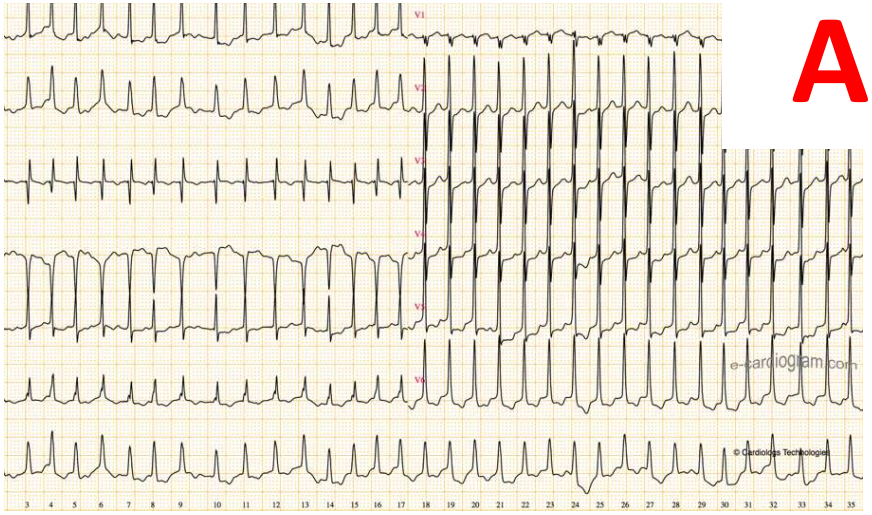
Urgence ?

Anticoagulation

- B. Biologique
- AOD
- AVK

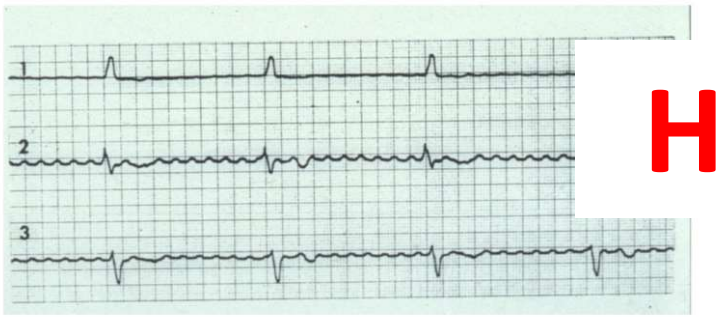
A

Hémodynamique



A

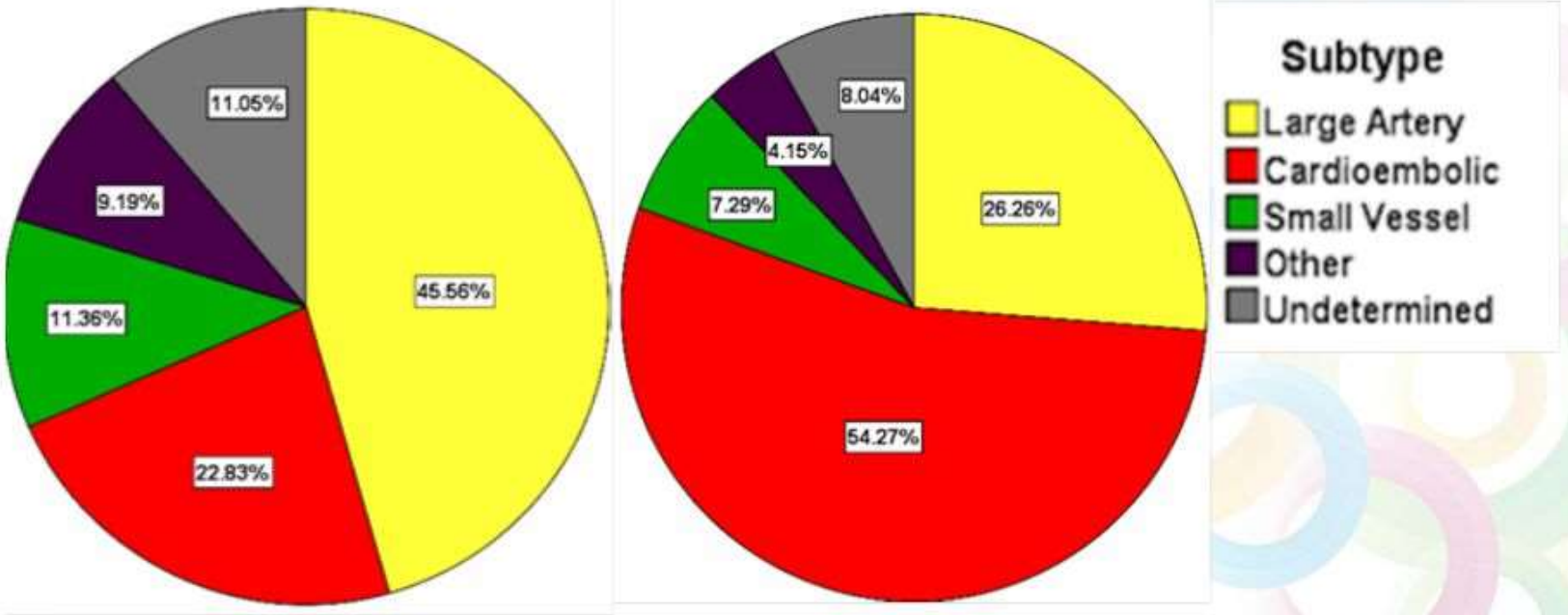
Fibrillation auriculaire et bloc auriculo-ventriculaire complet



H

Ischemic stroke subtypes are changing

Before 2005 → After 2009



Cardioembolic strokes more common, large artery strokes less common

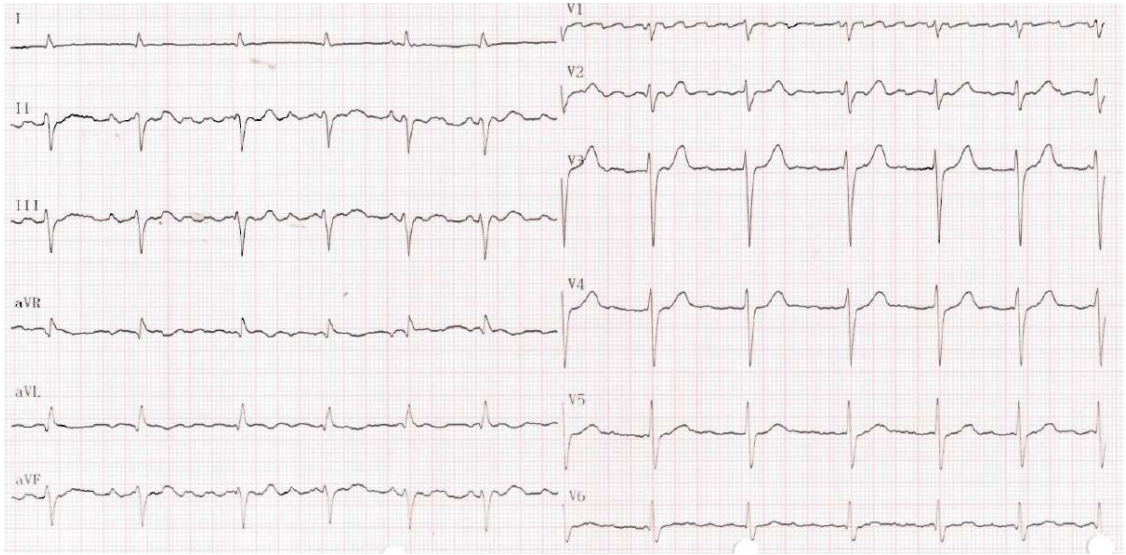
Bogiatzi C ….Spence JD. Stroke. 2014;45:3208-13.

BMJ

RESEARCH

Screening versus routine practice in detection of atrial fibrillation in patients aged 65 or over: cluster randomised controlled trial

David A Fitzmaurice, professor of primary care,[1] F D Richard Hobbs, professor, head of department,[1]



BMJ

RESEARCH

Screening versus routine practice in detection of atrial fibrillation in patients aged 65 or over: cluster randomised controlled trial

David A Fitzmaurice, professor of primary care,[1] F D Richard Hobbs, professor, head of department,[1]

Etude anglaise prospective multicentrique comprenant 14 802 patients de > 65 ans démontre qu'un dépistage opportuniste permettait une détection de **1,6% de FA nouvellement diagnostiquée** sur une année **soit 0,6% de plus comparé au groupe contrôle (pas d'intervention)**

Les recommandations

Recommendations	Class[a]	Level[b]
Opportunistic screening for AF is recommended by pulse taking or ECG rhythm strip in patients >65 years of age.	I	B

AF Guidelines ESC 2016

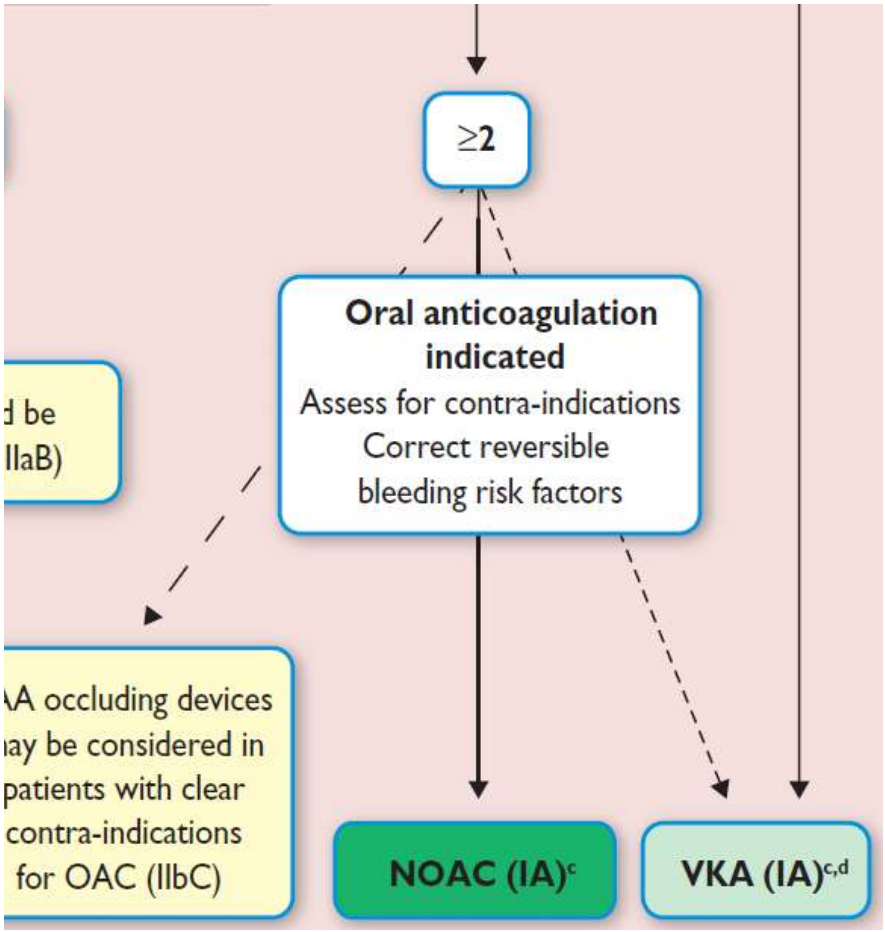
Anticoagulation: AOD +++

2019 Focused Update on Atrial Fibrillation

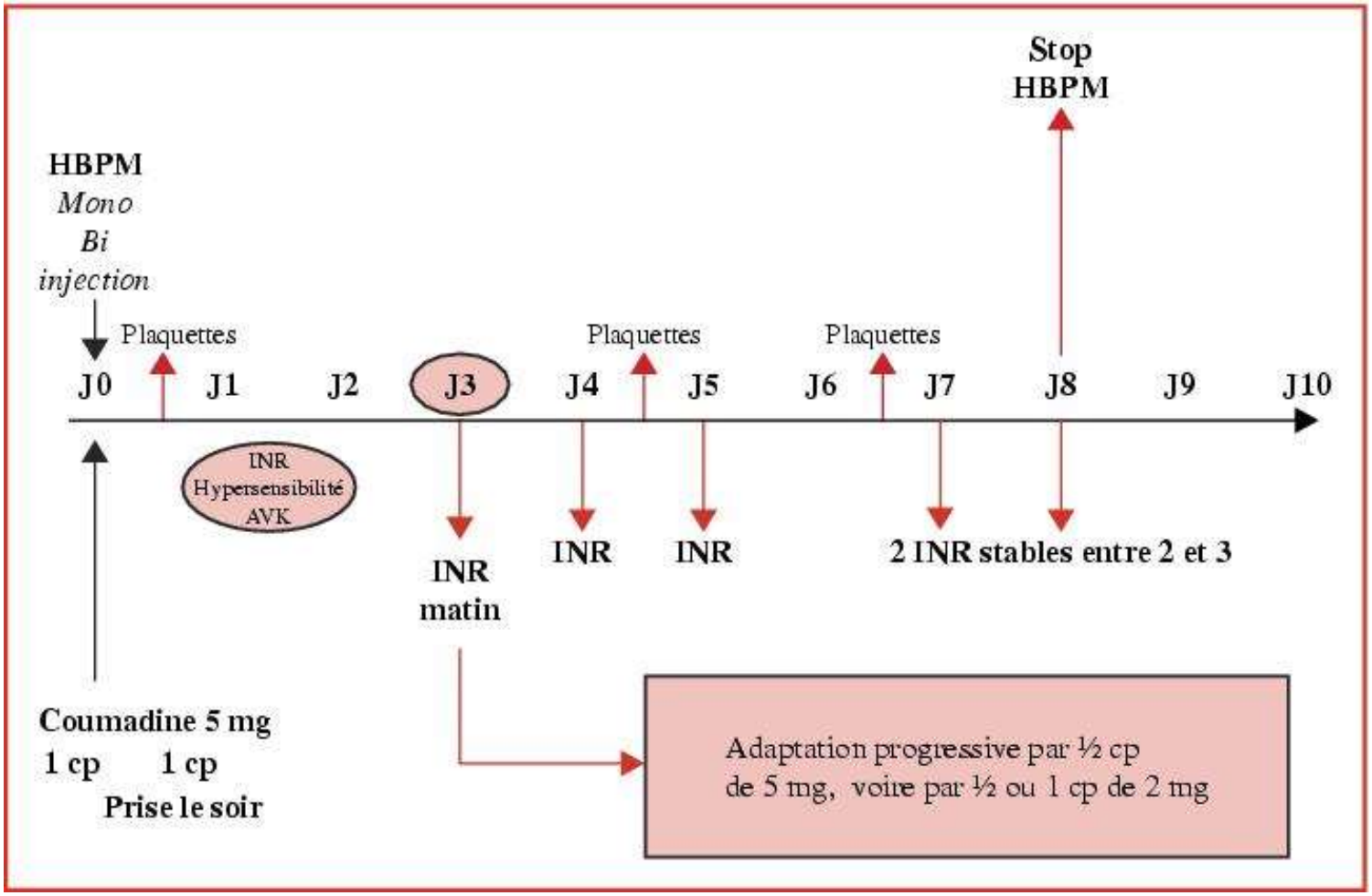
Recommendations for Selecting an Anticoagulant Regimen—Balancing Risks and Benefits

Referenced studies that support new or modified recommendations are summarized in Online Data Supplements 1 and 2.

COR	LOE	Recommendations
I	A	1. For patients with AF and an elevated CHA_2DS_2-VASc score of 2 or greater in men or 3 or greater in women, oral anticoagulants are recommended. Options include: Warfarin (LOE: A)[S4.1.1-5–S4.1.1-7] Dabigatran (LOE: B)[S4.1.1-8] Rivaroxaban (LOE: B)[S4.1.1-9] Apixaban (LOE: B),[S4.1.1-10] or Edoxaban (LOE: B-R)[S4.1.1-11] **MODIFIED:** This recommendation has been updated in response to the approval of edoxaban, a new factor Xa inhibitor. More precision in the use of CHA_2DS_2-VASc scores is
	B	
	B	



Anticoagulation: AVK ?



Anticoagulation: AVK

ORIGINAL RESEARCH

American Heart Association | American Stroke Association.

Short-Term Risk of Bleeding During Heparin Bridging at Initiation of Vitamin K Antagonist Therapy in More Than 90 000 Patients With Nonvalvular Atrial Fibrillation Managed in Outpatient Care

Kim Bouillon, MD, PhD; Marion Bertrand, MSc; Lotfi Boudali, MD; Pierre Ducimetière, PhD; Rosemary Dray-Spira, MD, PhD; Mahmoud Zureik, MD, PhD

	All	No Heparin Bridging	Heparin Bridging	
	N=90 826	N=63 679 (70.1%)	N=27 147 (29.9%)	*P* Value
Age, mean (SD), y	72.3 (11.7)	72.6 (11.9)	71.5 (11.4)	<0.001*
Women, n (%)	45 316 (49.9)	32 702 (51.4)	12 614 (46.5)	<0.001†
Social deprivation index (quintiles), n (%)				
1	15 484 (17.9)	10 873 (17.9)	4611 (17.8)	0.110†
2	17 295 (20.0)	12 036 (19.8)	5259 (20.3)	
3	17 399 (20.1)	12 210 (20.1)	5189 (20.0)	
4	18 121 (20.9)	12 633 (20.8)	5488 (21.2)	
5	18 330 (21.2)	12 973 (21.4)	5357 (20.7)	
Missing data	4197 (4.6)	2954 (4.6)	1243 (4.6)	0.693†
Type of VKA, n (%)				
Acenocoumarol	6220 (6.8)	4932 (7.7)	1288 (4.7)	<0.001†
Fluindione	75 192 (82.8)	51 857 (81.4)	23 335 (86.0)	
Warfarin	9414 (10.4)	6890 (10.8)	2524 (9.3)	

Bouillon et al JAHA 2016

Anticoagulation

Table 2. Number of Events According to Duration of Follow-Up

	All, n (%)	No Heparin Bridging, n (%)	Heparin Bridging, n (%)	*P* Value*
From 0 to 1 month of follow-up				
Bleeding	318 (0.35)	191 (0.30)	127 (0.47)	<0.001
Intracranial	57 (0.06)	37 (0.06)	20 (0.07)	0.389
Gastrointestinal	99 (0.11)	57 (0.09)	42 (0.15)	0.006
Other	162 (0.18)	97 (0.15)	65 (0.24)	0.004
Ischemic stroke plus systemic embolism	151 (0.17)	107 (0.17)	44 (0.16)	0.840
Ischemic stroke	124 (0.14)	94 (0.15)	30 (0.11)	0.165
Systemic embolism	27 (0.03)	13 (0.02)	14 (0.05)	0.013
From 2 to 3 months of follow-up				
Bleeding	231 (0.31)	162 (0.32)	69 (0.29)	0.555
Intracranial	59 (0.08)	38 (0.07)	21 (0.09)	0.521
Gastrointestinal	57 (0.08)	41 (0.08)	16 (0.07)	0.558
Other	115 (0.15)	83 (0.16)	32 (0.13)	0.374
Ischemic stroke plus systemic embolism	122 (0.16)	84 (0.16)	38 (0.16)	0.899
Isch				87
Sys				52

60 % d'augmentation des saignements avec la stratégie Héparine/AVK

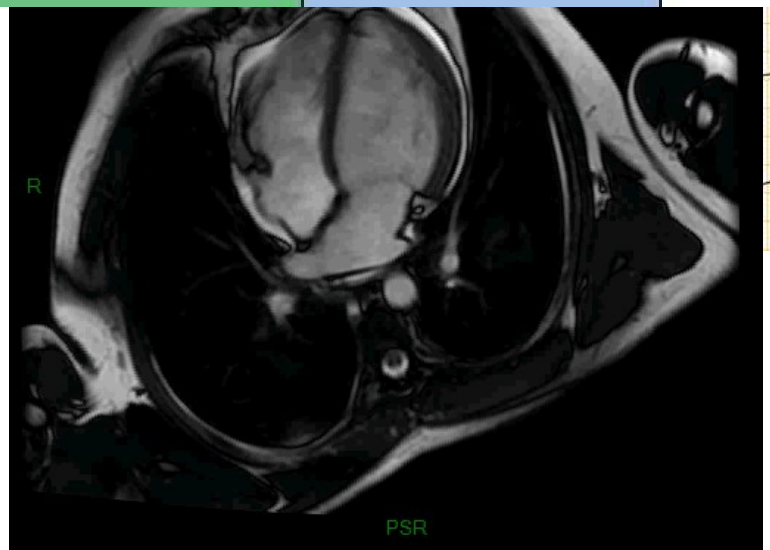
Bouillon et al JAHA 2016

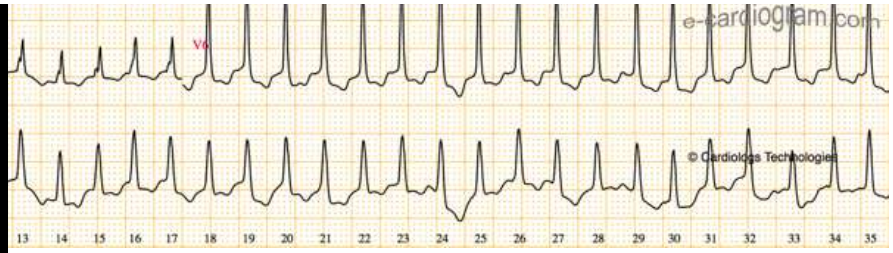
Urgence à la réduction ?

H

I C

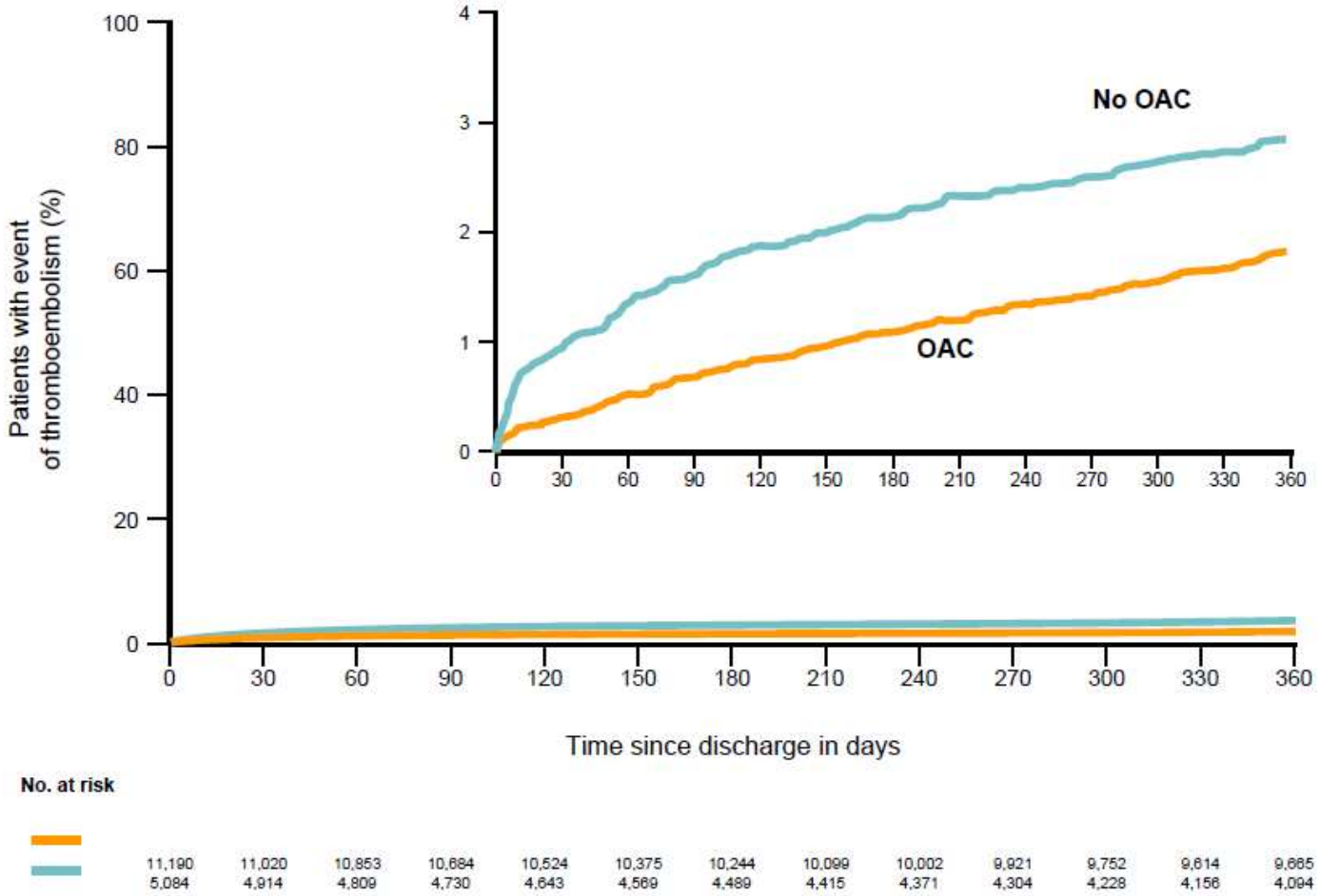
2. For patients with AF or atrial flutter of more than 48 hours' duration or unknown duration that requires immediate cardioversion for hemodynamic instability, anticoagulation should be initiated as soon as possible and continued for at least 4 weeks after cardioversion unless contraindicated.





Anticoagulation +++
Plutôt héparine

Cardioversion avec ou sans anticoagulants ?



Hansen ML, et al. Europace 2015;17:18–23
Palomäki A, et al. Int J Cardiol 2016;203:269–73

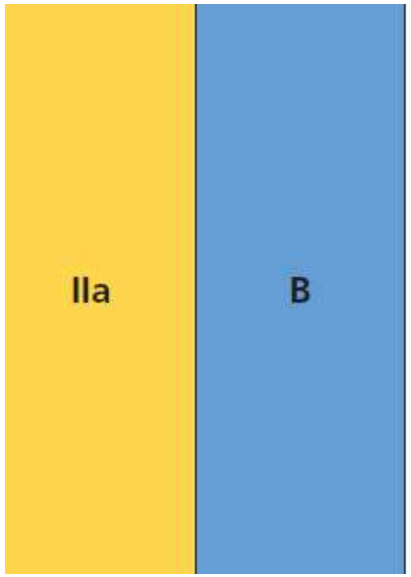
Cardioversion = La règle des 48 H

COR	LOE	Recommendations
I	B-R	1. For patients with AF or atrial flutter of 48 hours' duration or longer, or when the duration of AF is unknown, anticoagulation with warfarin (INR 2.0 to 3.0), a factor Xa inhibitor, or direct thrombin inhibitor is recommended for at least 3 weeks before and at least 4 weeks after cardioversion, regardless of the CHA_2DS_2-VASc score or the method (electrical or pharmacological) used to restore sinus rhythm.[S6.1.1-1–S6.1.1-12] **MODIFIED:** The 2014 AF Guideline recommendation for use of warfarin around

FA/Flutter > 48 h (ou inconnue) nécessite des OAC 3 semaines avant et 4 semaines après la cardioversion

INDEPENDEMMENT du Score CHADS2vasc

Cardioversion = La règle des 48 H



5. For patients with AF or atrial flutter of 48 hours' duration or longer or of unknown duration who have not been anticoagulated for the preceding 3 weeks, it is reasonable to perform transesophageal echocardiography before cardioversion and proceed with cardioversion if no left atrial thrombus is identified, including in the LAA, provided that anticoagulation is achieved before transesophageal echocardiography and maintained after cardioversion for at least 4 weeks.[S6.1.1-15]

FA/Flutter > 48 h (ou inconnue) nécessitant une cardioversion immédiate, ETO raisonnable.

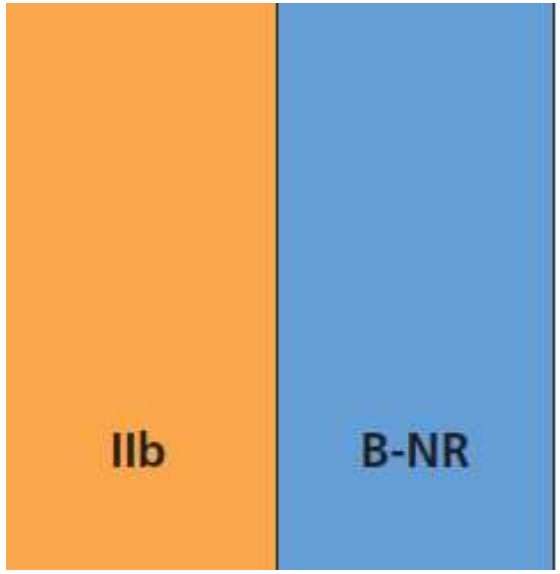
OAC à poursuivre minimum 4 semaines.

Cardioversion = La règle des 48 H

4. For patients with AF or atrial flutter of less than 48 hours' duration with a CHA_2DS_2-VASc score of 2 or greater in men and 3 or greater in women, administration of heparin, a factor Xa inhibitor, or a direct thrombin inhibitor is reasonable as soon as possible before cardioversion, followed by long-term anticoagulation therapy.[S6.1.1-13,S6.1.1-14]

FA /Flutter < 48 h (Score > 2) NÉCESSITE DES OAC SANS DÉLAI et au long cours après cardioversion

Cardioversion = La règle des 48 H



6. For patients with AF or atrial flutter of less than 48 hours' duration with a CHA_2DS_2-VASc score of 0 in men or 1 in women, administration of heparin, a factor Xa inhibitor, or a direct thrombin inhibitor, versus no anticoagulant therapy, may be considered before cardioversion, without the need for postcardioversion oral anticoagulation.[S6.1.1-13,S6.1.1-14,S6.1.1-16]

FA/Flutter < 48 h (avec score 0 H, 1 F) considère des OAC avant cardioversion.

Mais pas de reconduction après.

Early or Delayed Cardioversion in Recent-Onset Atrial Fibrillation

N.A.H.A. Pluymaekers, E.A.M.P. Dudink, J.G.L.M. Luermans, J.G. Meeder, T. Lenderink, J. Widdershoven, J.J.J. Bucx, M. Rienstra, O. Kamp, J.M. Van Opstal, M. Alings, A. Oomen, C.J. Kirchhof, V.F. Van Dijk, H. Ramanna, A. Liem, L.R. Dekker, B.A.B. Essers, J.G.P. Tijssen, I.C. Van Gelder, and H.J.G.M. Crijns, for the RACE 7 ACWAS Investigators*

- FA symptomatique de plus 36H
- Stratégie « wait and see » *vs Stratégie de cardioversion précoce.*

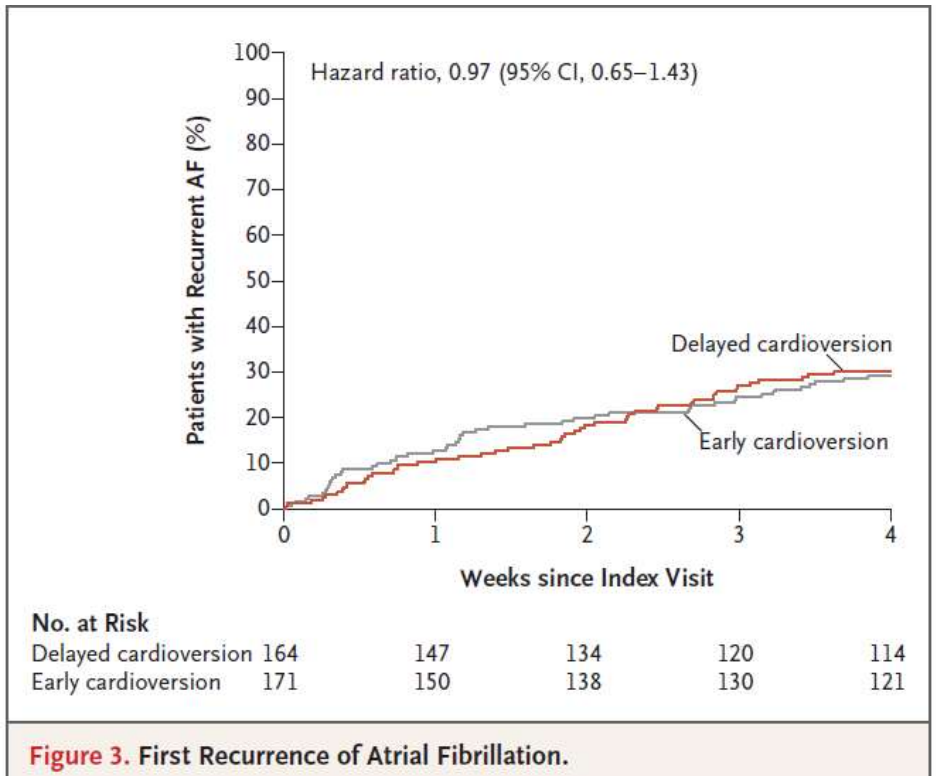


Figure 3. First Recurrence of Atrial Fibrillation.

Pluymaekers et al NEJM 2019

Cardioversion pharmacologique

Time Course for Restoration of SR

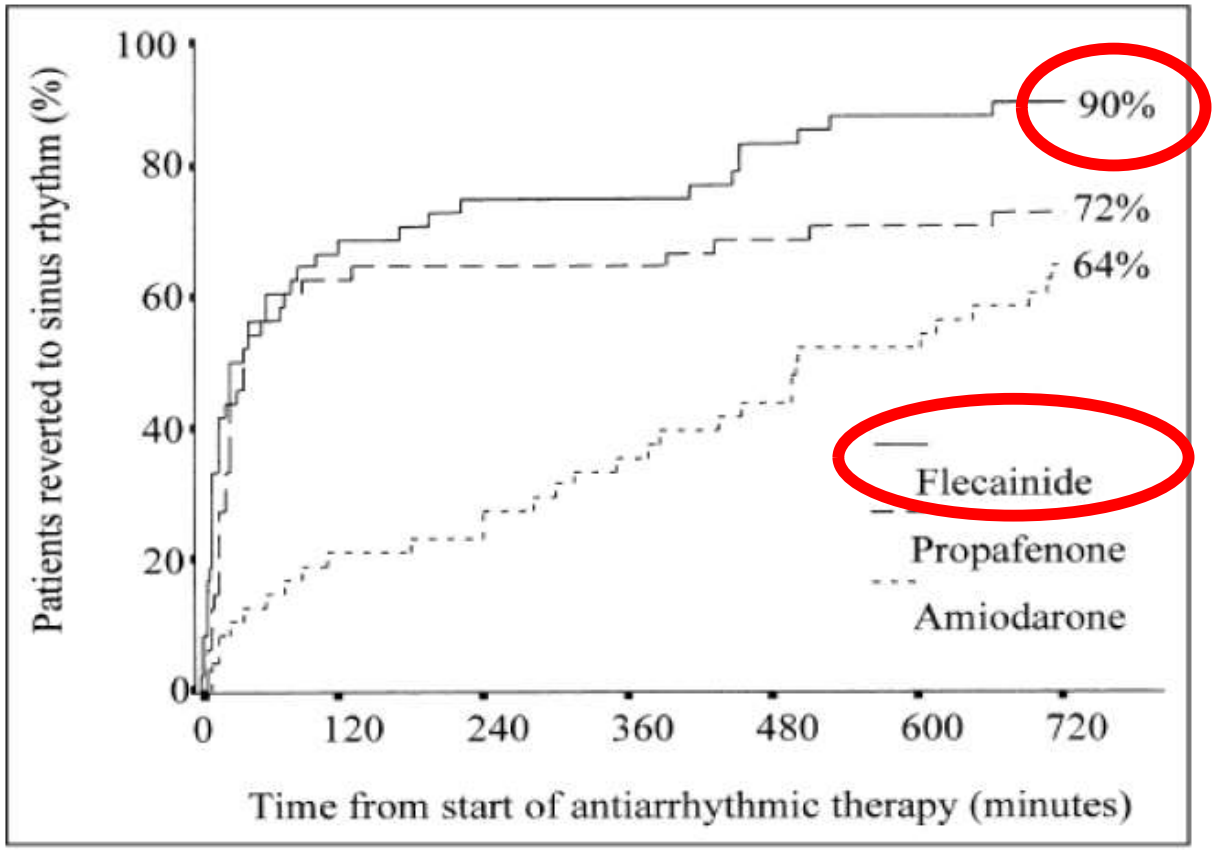


FIGURE 1. Cumulative conversion rates (%) of atrial fibrillation for flecainide, propafenone, and amiodarone based on time after start of antiarrhythmic therapy.

F. J. Martinez- Marcos et al, Am J Cardiol 2000

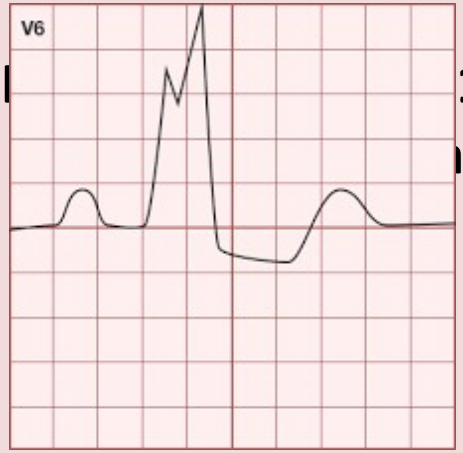
Cardioversion pharmacologique

Table 16 Antiarrhythmic drugs for pharmacological cardioversion

Drug	Route	1st dose	Follow-up dose	Risks	Reference
Flecainide	Oral IV	200–300 mg 1.5–2 mg/kg over 10 min	N/A	Hypotension, atrial flutter with 1:1 conduction, QT prolongation. Avoid in patients with IHD and/or significant structural heart disease.	595, 598

In patients with no history of ischaemic or structural heart disease, flecainide, propafenone, or vernakalant are recommended for pharmacological cardioversion of new-onset AF.

I | A



Flecaine I 150 mg) sur 20 min (monitoring ECG)

ax 200 mg

Cardiopathies structurelles

ESC guideline 2016

Cardioversion pharmacologique

Amiodarone	IV[a]	5–7 mg/kg over 1–2 hours	50 mg/hour to a maximum of 1.0 g over 24 hours	Phlebitis, hypotension, bradycardia/AV block. Will slow ventricular rate. Delayed conversion to sinus rhythm (8–12 hours).	596–601

In patients with ischaemic and/or structural heart disease, amiodarone is recommended for cardioversion of AF. I A 597–601

Amiodarone
IVL 1 à 2 AMP sur 20 min
PO: 4 à 6 cp en une seule prise (A renouveler 2 à 3/j)

ESC guideline 2016

Cardioversion of recent onset of atrial fibrillation

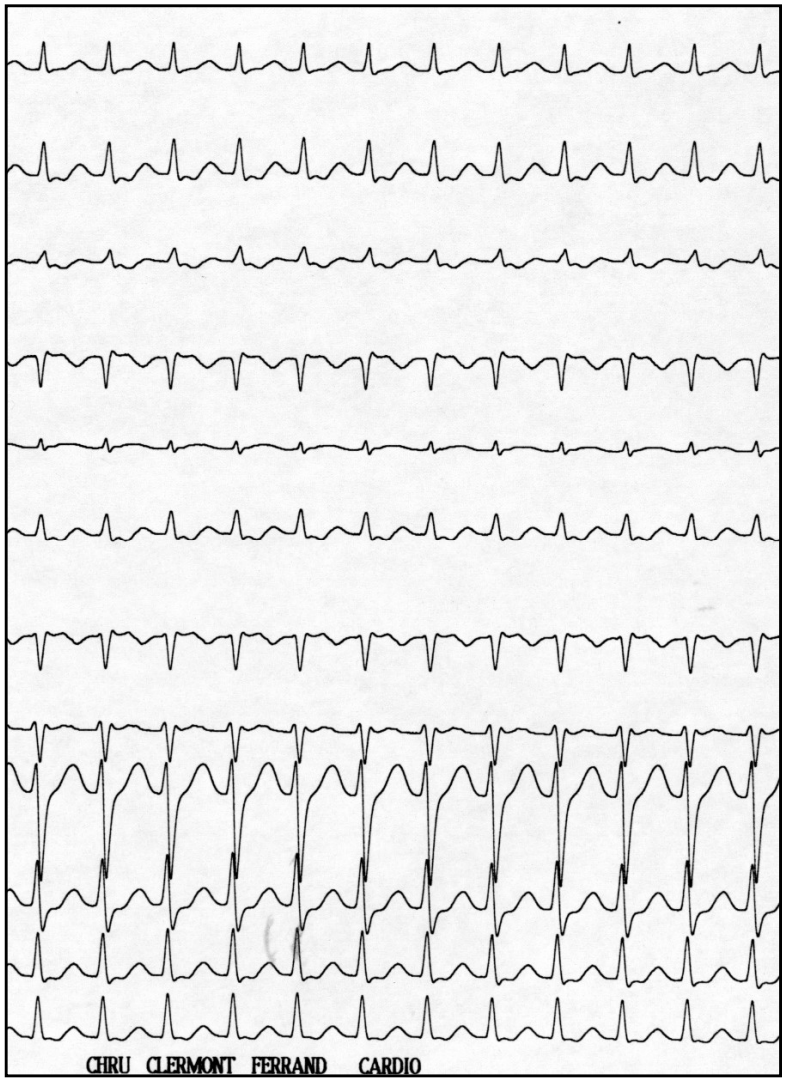
European Heart Journal - doi:10.1093/eurheartj/ehw210

A retenir:

- Hospitalisation si IC ou troubles conductifs.
- Instaurer OAC sans délai.
- Respecter la règle des 48H.
- AOD en première intention.
- Pas de relais Héparine/AVK.
- Flécaïne en première intention pour Cardioversion chimique (Attention C.I).
- Avoir dans le cabinet des OAC (AOD) et de la flécaïne et/ou Cordarone.

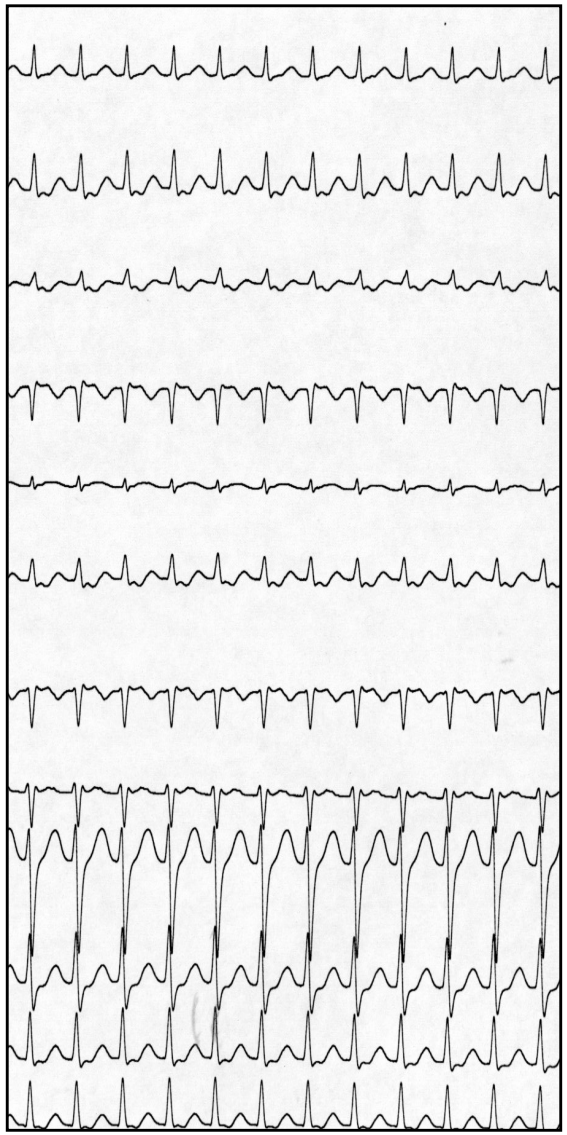
Les tachycardies jonctionnelles

Tachycardies régulières à **QRS fins**



- Plus impressionnantes que dangereuses.
- Souvent bien tolérées.
- Aux Urgences +++
- A gérer en ambulatoire.

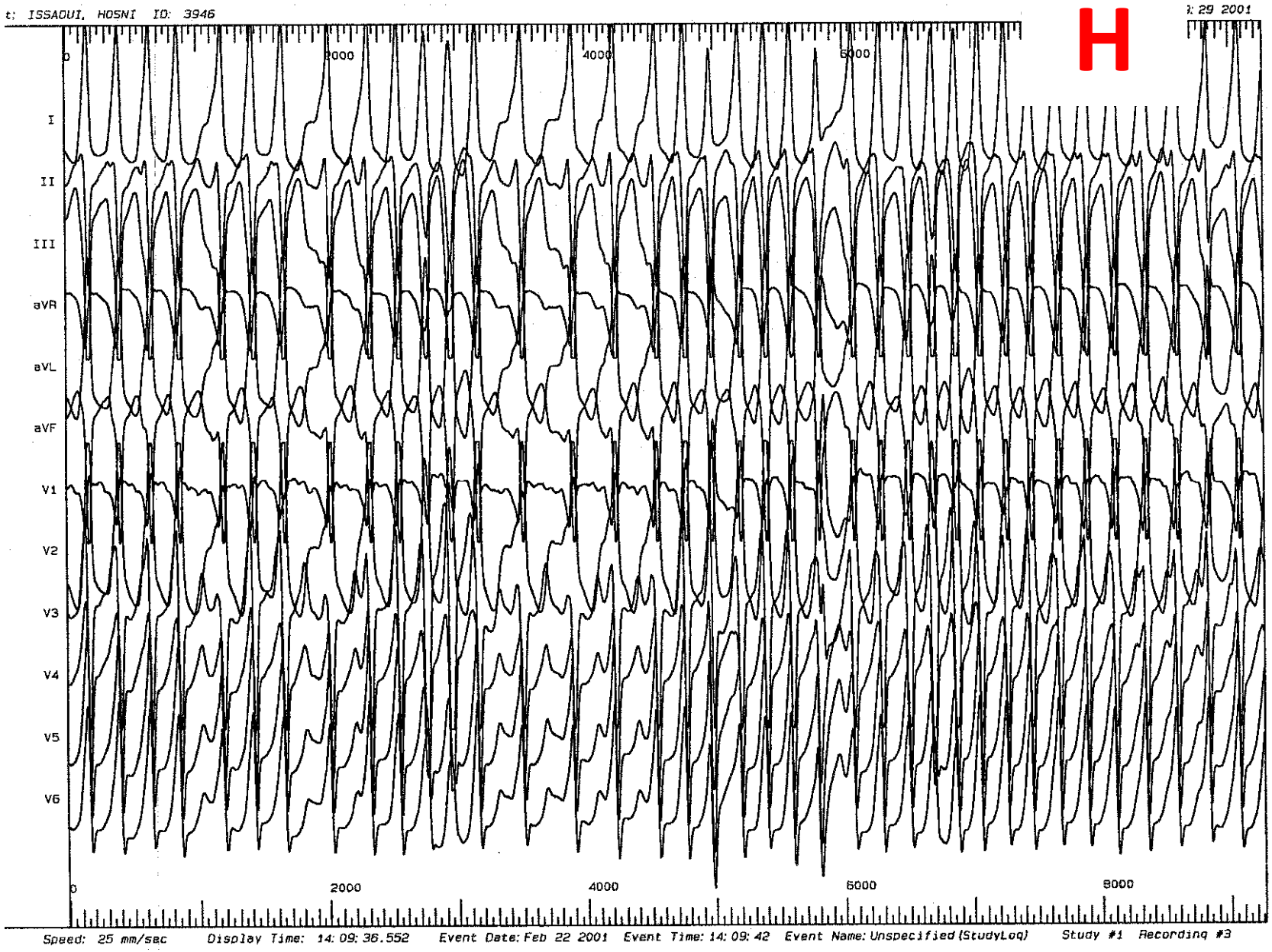
Tachycardies régulières à **QRS fins**



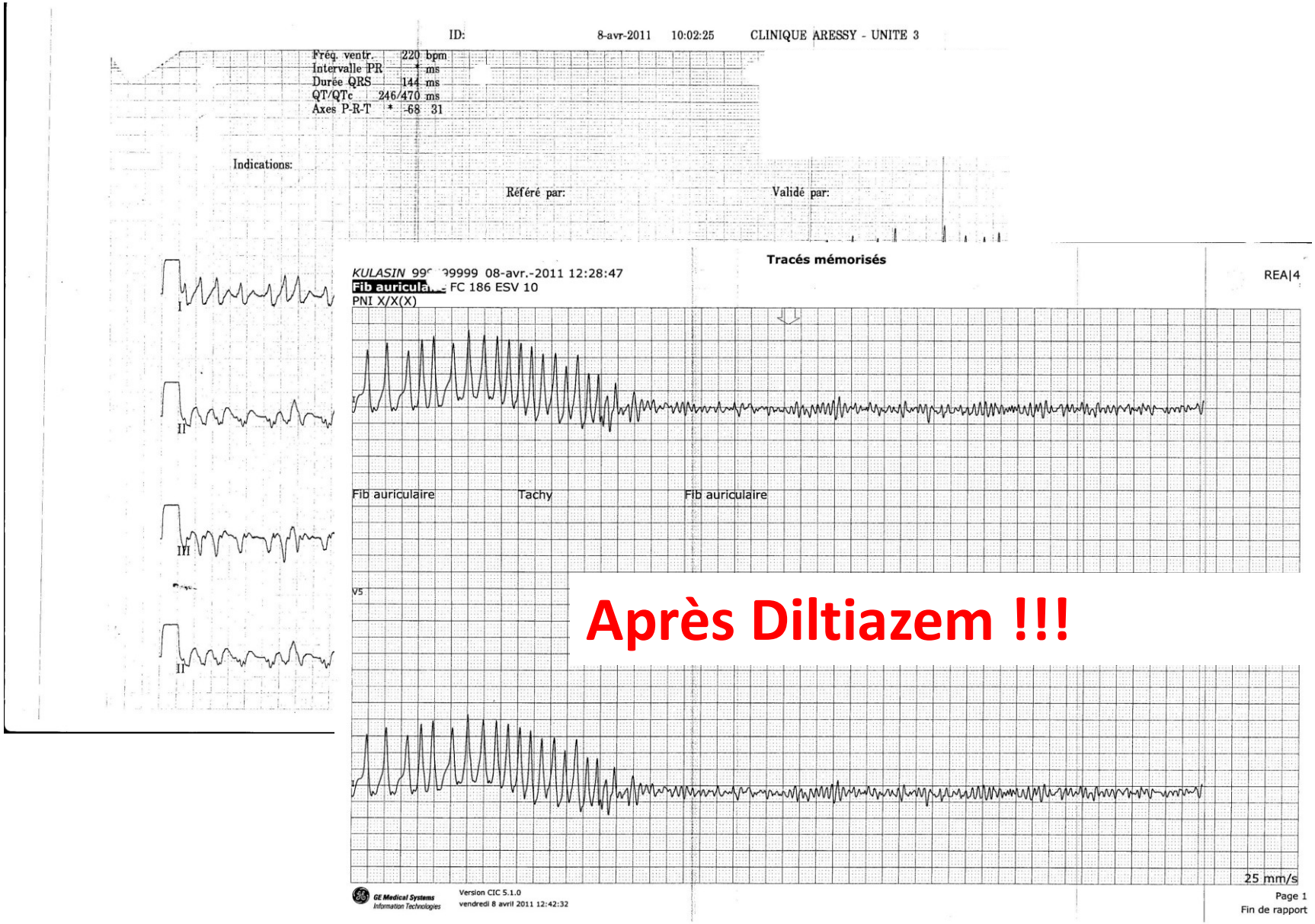
Vagal manoeuvres, preferably in the supine position with leg elevation, are recommended.[41,89–91]	I	B
Adenosine (6–18 mg i.v. bolus) is recommended if vagal manoeuvres fail.[92–94]	I	B

Verapamil or diltiazem (i.v.) should be considered, if vagal manoeuvres and adenosine fail.[92,94–98]	IIa	B
Beta-blockers (i.v. esmolol or metoprolol) should be considered if vagal manoeuvres and adenosine fail.[97,99,100]	IIa	C

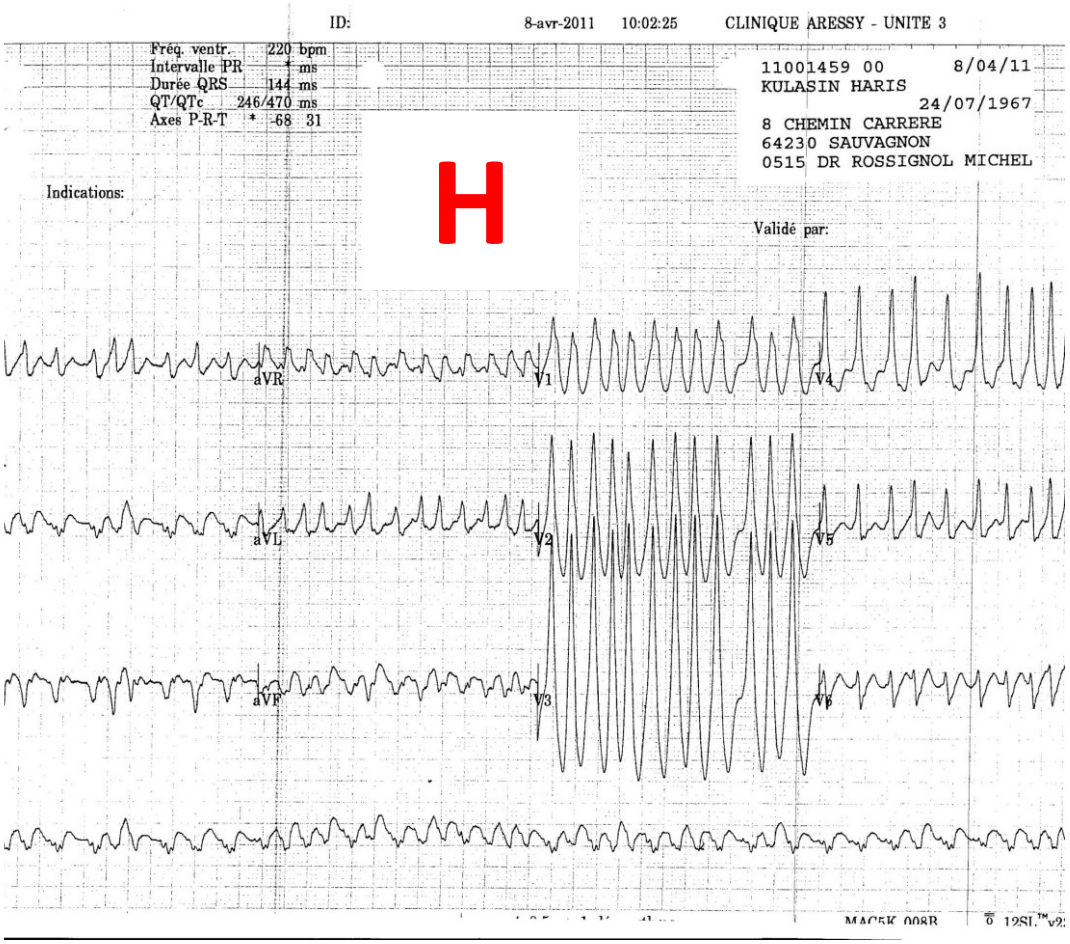
Tachycardies irrégulières à **QRS larges**



Tachycardies irrégulières à **QRS larges**



Tachycardies irrégulières à **QRS larges**



- **Flécaïne/Rythmol**
- **Cordarone**

Contre indication

- Vérapamil
- Diltiazem.
- BB
- Digoxine
- Striadyne

* Risque de conduction AV rapide si PRE courte, tachycardie antidromique et FA ou flutter

Je vous remercie