Guidelines for the management of atrial fibrillation

EUROPEAN SOCIETY OF CARDIOLOGY®

The Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC)

The European Society of Cardiology 2010

Nouveautés dans la prise en charge de la Fibrillation Atriale

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Nouveautés dans le Traitement Antithrombotique de la Fibrillation Atriale

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Table 1 Classes of recommendations

Classes of recommendations	Definition
Class I	Evidence and/or general agreement that a given treatment or procedure is beneficial, useful, effective.
Class II	Conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of the given treatment or procedure.
Class IIa	*Weight of evidence/opinion is in favour of usefulness/efficacy.*
Class IIb	*Usefulness/efficacy is less well established by evidence/opinion.*
Class III	Evidence or general agreement that the given treatment or procedure is not useful/effective, and in some cases may be harmful.

Table 2 Levels of evidence

Level of evidence A	Data derived from multiple randomized clinical trials or meta-analyses.
Level of evidence B	Data derived from a single randomized clinical trial or large non-randomized studies.
Level of evidence C	Consensus of opinion of the experts and/or small studies, retrospective studies, registries.

Table 3 Clinical events (outcomes) affected by AF

Outcome parameter	Relative change in AF patients
1. Death	Death rate doubled.
2. Stroke (includes haemorrhagic stroke and cerebral bleeds)	Stroke risk increased; AF is associated with more severe stroke.
3. Hospitalizations	Hospitalizations are frequent in AF patients and may contribute to reduced quality of life.
4. Quality of life and exercise capacity	Wide variation, from no effect to major reduction. AF can cause marked distress through palpitations and other AF-related symptoms.
5. Left ventricular function	Wide variation, from no change to tachycardiomyopathy with acute heart failure.

AF = atrial fibrillation.

Outcomes are listed in hierarchical order modified from a suggestion put forward in a recent consensus document.[3] The prevention of these outcomes is the main therapeutic goal in AF patients.

Score EHRA
Symptômes associés à la FA

Table 6 **EHRA score of AF-related symptoms**

Classification of AF-related symptoms (EHRA score)	
EHRA class	**Explanation**
EHRA I	'No symptoms'
EHRA II	'Mild symptoms'; normal daily activity not affected
EHRA III	'Severe symptoms'; normal daily activity affected
EHRA IV	'Disabling symptoms'; normal daily activity discontinued

AF = atrial fibrillation; EHRA = European Heart Rhythm Association.

Classification de la Fibrillation Atriale

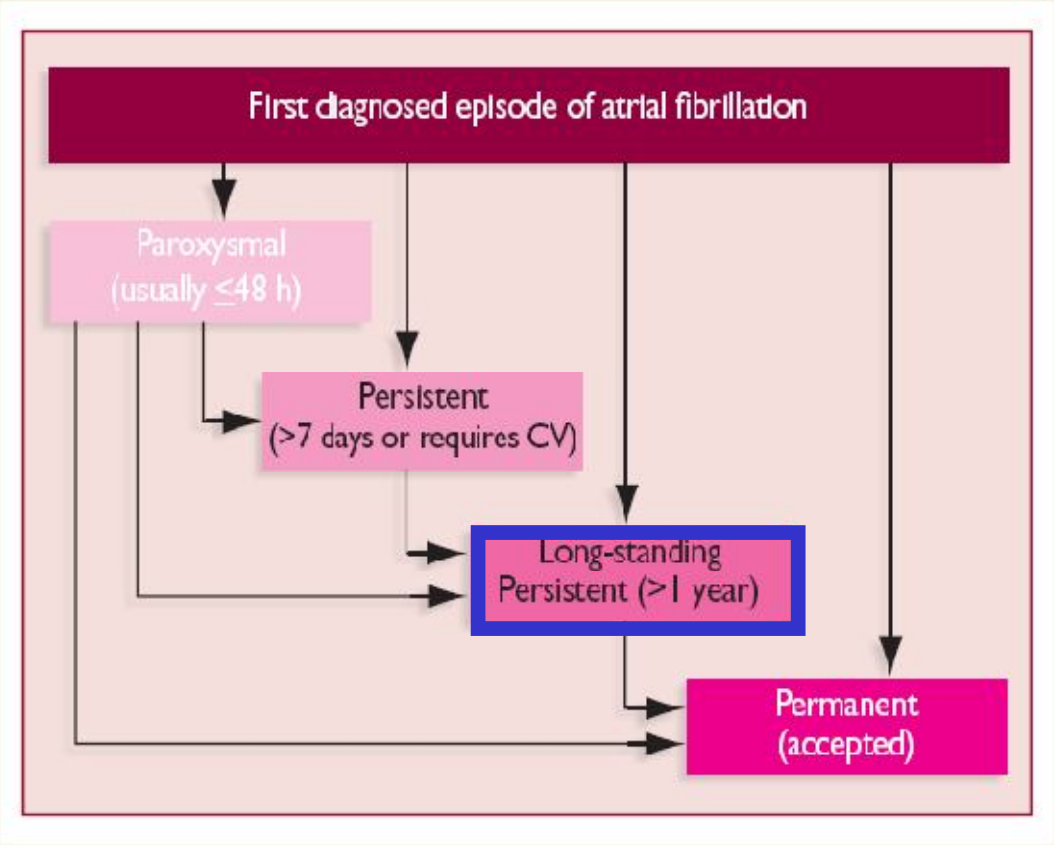

Figure 2 Different types of AF. AF = atrial fibrillation; CV = cardioversion. The arrhythmia tends to progress from paroxysmal (self-terminating, usually <48 h) to persistent [non-self-terminating or requiring cardioversion (CV)], long-standing persistent (lasting longer than 1 year) and eventually to permanent (accepted) AF. First-onset AF may be the first of recurrent attacks or already be deemed permanent.

Long-standing persistent
AF has lasted for ≥ 1 year when it is decided to adopt a rhythm control strategy

Nouveau type de FA

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Le Traitement Antithrombotique de la Fibrillation Atriale

$CHADS_2$: évaluation du risque d'AVC chez des patients avec FA "non valvulaire"

FA valvulaire = FA + prothèse
Valvulaire ou Rétrécissement Mitral >>> AVK

Recommandations ESC 2006

$CHADS_2$ score	Patients (n=1733)	Adjusted stroke rate (%/year)[a] (95% confidence interval)
0	120	1.9 (1.2–3.0)
1	463	2.8 (2.0–3.8)
2	523	4.0 (3.1–5.1)
3	337	5.9 (4.6–7.3)
4	220	8.5 (6.3–11.1)
5	65	12.5 (8.2–17.5)
6	5	18.2 (10.5–27.4)

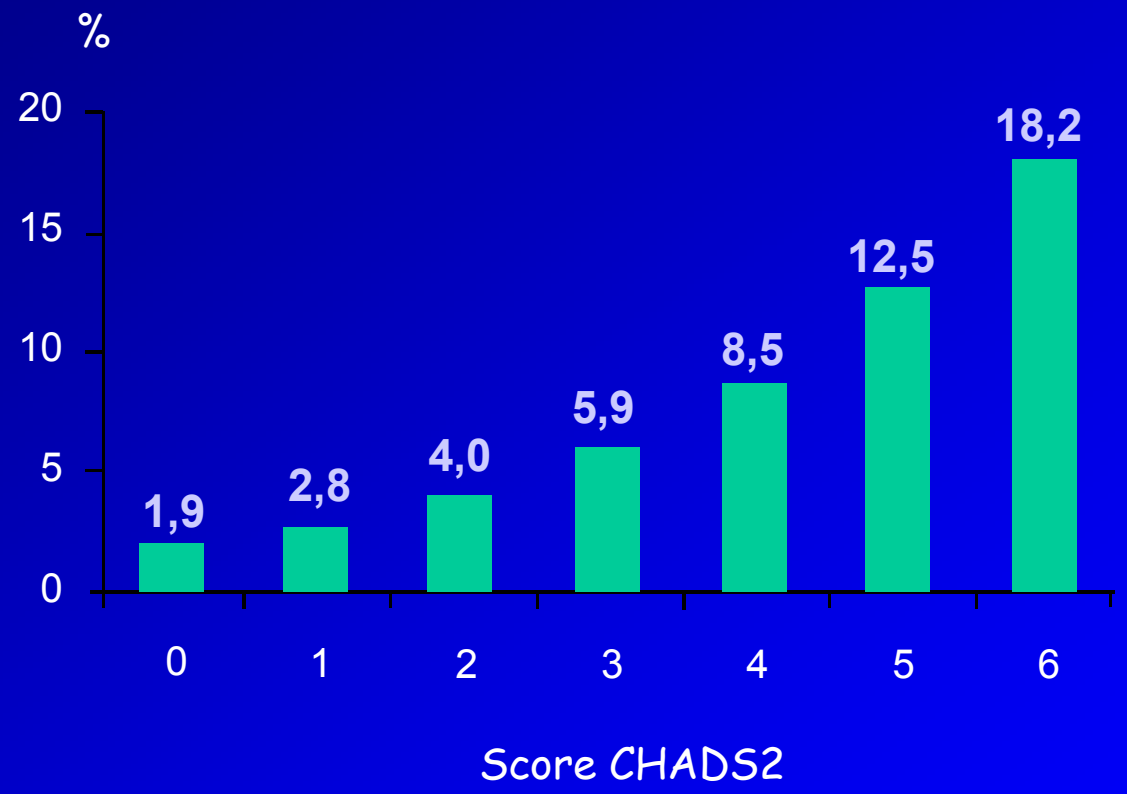
Score $CHADS_2$

Congestive HF
Hypertension
Age > 75 ans
Diabète
Stroke

Fuster V, et al. ACC/AHA/ESC 2006 guidelines for the management of patients with atrial fibrillation. 2006 Sep;8(9):651-745.

Relation entre le score de $CHADS_2$ et le risque annuel d'AVC

Recommandations ESC 2006



Rockson SG et al. JACC 2004

(a) Risk factors for stroke and thrombo-embolism in non-valvular AF	
'Major' risk factors	**'Clinically relevant non-major' risk factors**
Previous stroke, TIA, or systemic embolism Age ≥75 years	Heart failure or moderate to severe LV systolic dysfunction (e.g. LV EF ≤ 40%) Hypertension - Diabetes mellitus Female sex - Age 65–74 years Vascular disease[a]

(a) Prior myocardial infarction, peripheral artery disease, aortic plaque

(b) Risk factor-based approach expressed as a point based scoring system, with the acronym CHA_2DS_2-VASc
(Note: maximum score is 9 since age may contribute 0, 1, or 2 points)

Nouveau score de risque thrombo-embolique

>>>Élargissement des indications de traitement antithrombotique

C
H
A_2
D
S_2
V
A
Sc

Risk factor	Score
Congestive heart failure/LV dysfunction < 40 %	1
Hypertension	1
Age ≥75	2
Diabetes mellitus	1
Stroke/TIA/thrombo-embolism	2
Vascular disease[a]	1
Age 65–74	1
Sex category (i.e. female sex)	1
Maximum score	**9**

Table 9 Approach to thromboprophylaxis in patients with AF

Risk category	CHA_2DS_2-VASc score	Recommended antithrombotic therapy
One 'major' risk factor* or ≥2 'clinically relevant non-major' risk factors	≥ 2	OAC[a] AVK INR cible 2-3
One 'clinically relevant non-major' risk factor	1	Either OAC[a] or aspirin 75–325 mg daily. Preferred: OAC rather than aspirin.
No risk factors	0	Either aspirin 75–325 mg daily or no antithrombotic therapy. Preferred: no antithrombotic therapy rather than aspirin.

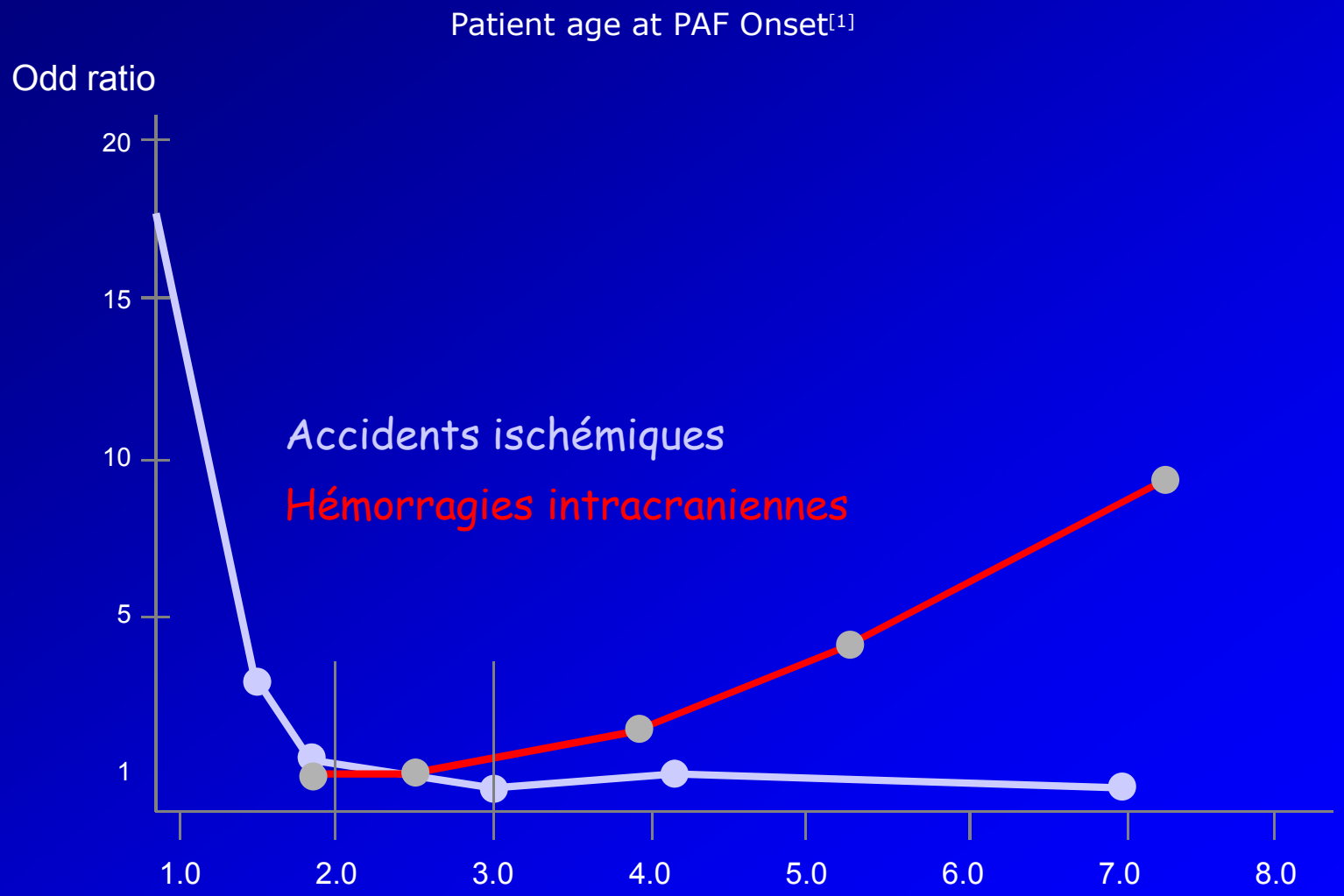
AF = atrial fibrillation; CHA_2DS_2-VASc = cardiac failure, hypertension, age ≥75 (doubled), diabetes, stroke (doubled)-vascular disease, age 65–74 and sex category (female); INR = international normalized ratio; OAC = oral anticoagulation, such as a vitamin K antagonist (VKA) adjusted to an intensity range of INR 2.0–3.0 (target 2.5).

Précisions sur le traitement antithrombotique

*AIT/AVC, embolie, âge >75 ans

« Patients aged < 60 years, with 'lone AF', i.e. no clinical history or echocardiographic evidence of cardiovascular disease, carry a very low cumulative stroke risk, estimated to be **1.3% over 15 years**. »

Risque d'hémorragie intracranienne selon l'intensité de l'anticoagulation



Fuster V, Ryden LE, Cannom DS et al. ACC/AHA/ESC 2006 guidelines for the management of patients with atrial fibrillation. 2006 Sep;8(9):651-745.

FA et antithrombotiques

d'une recommandation à l'autre…

- Patiente âgé de 70 ans

- FA paroxystique sur « cœur sain » depuis 2006…

- Pas de récidive de palpitations sous flécaine + bisoprolol, pas de traitement antithrombotique

- Consultation de suivi en Octobre 2010…

Modification thérapeutique ?

FA et antithrombotiques

d'une recommandation à l'autre…

- En 2006, évaluation du risque thromboembolique par score $CHADS_2 = 0$

>>> Aspirine 82 à 325 mg / j ou RIEN

- En 2010, score $CHA_2DS_2\text{-}VASc = 2$

>>> Traitement par AVK recommandé

FA et situations cliniques

Période péri-opératoire

- Patient âgé de 74 ans, CHA_2DS_2-$VASc$ = 3

- FA permanente sous aténolol + fluindione

- Chirurgie orthopédique pour PTG

Gestion du traitement antithrombotique de la FA en périopératoire ?

FA et situations cliniques

Période péri-opératoire

- « In patients with AF **who do not have mechanical prosthetic heart valves**, it is reasonable to interrupt anticoagulation **for up to 1 wk** without substituting heparin for surgical or diagnostic procedures that carry a risk of bleeding. »

Classe II a, niveau de preuve C

Recommandations ESC 2006

- « In patients with AF **who do not have mechanical prosthetic heart** valves or those who are not at high risk for thrombo-embolism who are undergoing surgical or diagnostic procedures that carry a risk of bleeding, the interruption of OAC (with subtherapeutic anticoagulation **for up to 48 h**) should be considered, without substituting heparin as 'bridging' anticoagulation therapy. »

Classe II a, niveau de preuve C

Recommandations ESC 2010

FA et situations cliniques

AVC ischémique

- Patient âgé de 67 ans, premier épisode de FA documenté à la phase aiguë d'un AVC ischémique constitué

- Pas de transformation hémorragique au TDM

- HTA traitée.

Gestion du traitement antithrombotique de la FA ?

FA et situations cliniques

AVC ischémique

- « In patients with AF presenting with acute stroke or TIA, management of uncontrolled hypertension should be considered before antithrombotic treatment is started, and cerebral imaging (CT or MRI) performed to exclude haemorrhage. »

- « In the absence of haemorrhage, OAC therapy **should be considered ~ 2 weeks after stroke**, but, in the presence of haemorrhage, anticoagulation should not be given. »

- « In the presence of a large cerebral infarction, **delaying the initiation of anticoagulation should be considered**, given the risk of haemorrhagic transformation. »

- « In patients with AF and an **acute TIA**, **OAC therapy should be considered as soon as possible** in the absence of cerebral infarction or haemorrhage. »

Classe IIa

FA et situations cliniques

AVC ischémique

- Même patient, récidive d'AVC ischémique malgré traitement par AVK bien conduit: INR = 2.7

Modification thérapeutique ?

FA et situations cliniques

AVC ischémique

- « In patients with AF who sustain an ischaemic stroke despite adjusted dose VKA (INR 2.0–3.0), **raising the intensity of anticoagulation to a higher INR range of 3.0–3.5** may be considered, rather than adding an antiplatelet agent, given that an appreciable risk in major bleeding only starts at INRs .3.5. »

Classe II a, niveau de preuve C

Recommandations ESC 2010

(Combinations of VKA (INR 2.0–3.0) with antiplatelet therapy have been studied, but no beneficial effect on ischaemic stroke or vascular events were seen, while more bleeding was evident.)

FA et situations cliniques

Angioplastie coronaire per-cutanée / SCA

- Patiente âgée de 72 ans, FA persistante sous sotalol 80x3/j + AVK

- SCA avec élévation de la troponine

- ACTP + stent actif CD_2

- Risque hémorragique ?

[HTA, Age, IRC avec créatinine sérique = 220 µmol/l, AINS pour Horton]

Prise en charge de la coronaropathie, traitement antithrombotique ?

FA et situations cliniques

Angioplastie coronaire per-cutanée / SCA

- Patiente âgée de 72 ans, FA persistante sous sotalol 80x3/j + AVK

- SCA avec élévation de la troponine

- ACTP + stent actif CD_2

- Risque hémorragique élevé (score HASBLED = 4)

[HTA, Age, IRC avec créatinine sérique = 220 µmol/l, AINS pour Horton]

Prise en charge de la coronaropathie, traitement antithrombotique ?

Table 11 Antithrombotic strategies following coronary artery stenting in patients with AF at moderate to high thrombo-embolic risk (in whom oral anticoagulation therapy is required) Classe IIa Niveau de preuve C !

Haemorrhagic risk	Clinical setting	Stent implanted	Anticoagulation regimen
Low or intermediate (e.g. HAS-BLED score 0–2)	Elective	Bare-metal	1 month: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Lifelong: VKA (INR 2.0–3.0) alone
	Elective	Drug-eluting	3 (-olimus[a] group) to 6 (paclitaxel) months: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone
	ACS	Bare-metal/ drug-eluting	6 months: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone
High (e.g. HAS-BLED score ≥3) **= stent nu recommandé**	Elective	Bare-metal[c]	2–4 weeks: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Lifelong: VKA (INR 2.0–3.0) alone
	ACS	Bare-metal[c]	4 weeks: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone

Stent actif ou SCA = jusqu'à 6 mois de triple association AVK + Aspirine 75 mg/j + Clopidogrel puis jusqu'à 1 an de double association AVK + clopidogrel puis AVK en monothérapie au long cours