2023
11ème SÉMINAIRE de CARDIOLOGIE INTERVENTIONNELLE de TROYES
01 & 02 AVRIL
SALLE DU CONSEIL MUNICIPAL
HOTEL DE VILLE de TROYES

19H00 - 19H30

LA GESTION ADAPTÉE

Syndrome Coronaire Aigue et Fibrillation Atriale

Pr. Camille Brasselet - Reims

Disclosure

- déclare avoir les liens d'intérêts suivants à ce jour dans le cadre de cette présentation

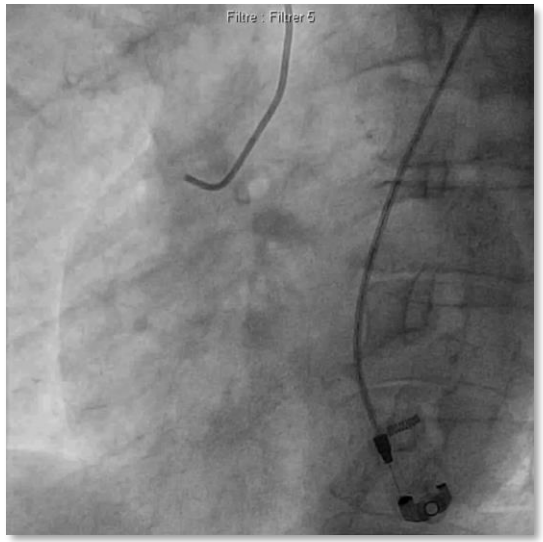
Affiliation/Financial Relationship	Company
• Grant/Research Support	• Cordis - Medtronic - Boston Scientific - Terumo - Alvi Medica - Abbott - Microport - Translumina
• Consulting Fees/Honoraria	• Medtronic - Alvi Medica

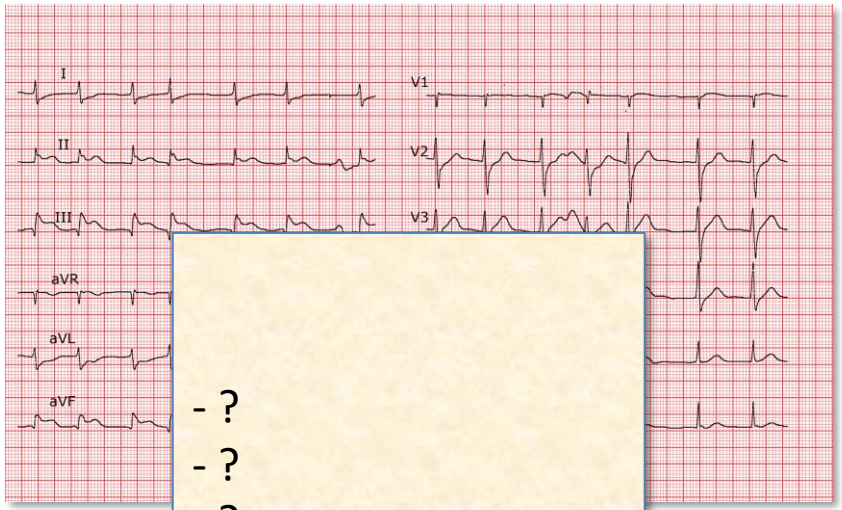
Loi du 4 mars 2002 (article L 4113-13 du code de la santé publique) et décret du 28 mars 2007

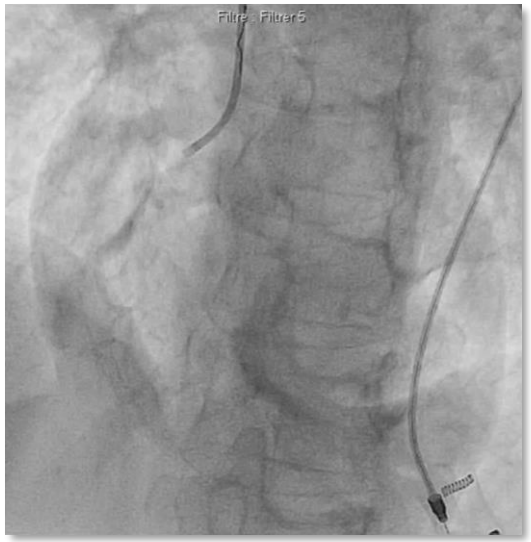
- déclare ne faire état dans cette présentation que de données confirmées

(article R.4127-13 du code de la santé publique)

SCA et FA







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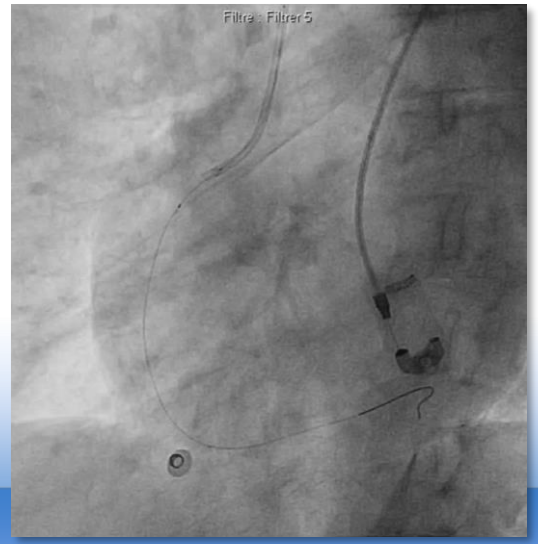
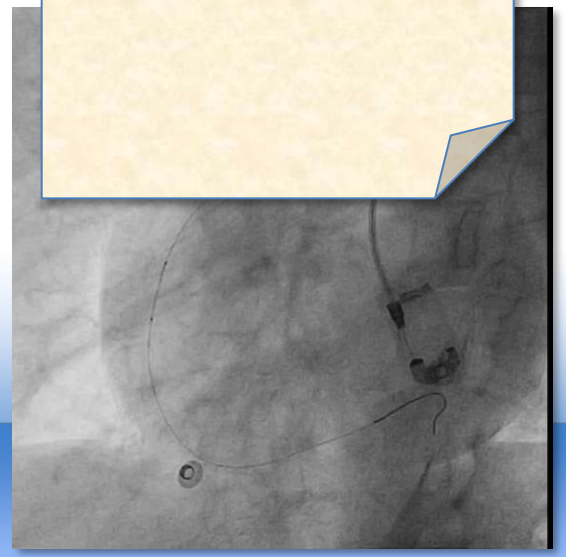




SCA et FA


Journal of Cardiology

Original article

Clinical features and in-hospital mortality associated with different types of atrial fibrillation in patients with acute coronary syndrome with and without ST elevation

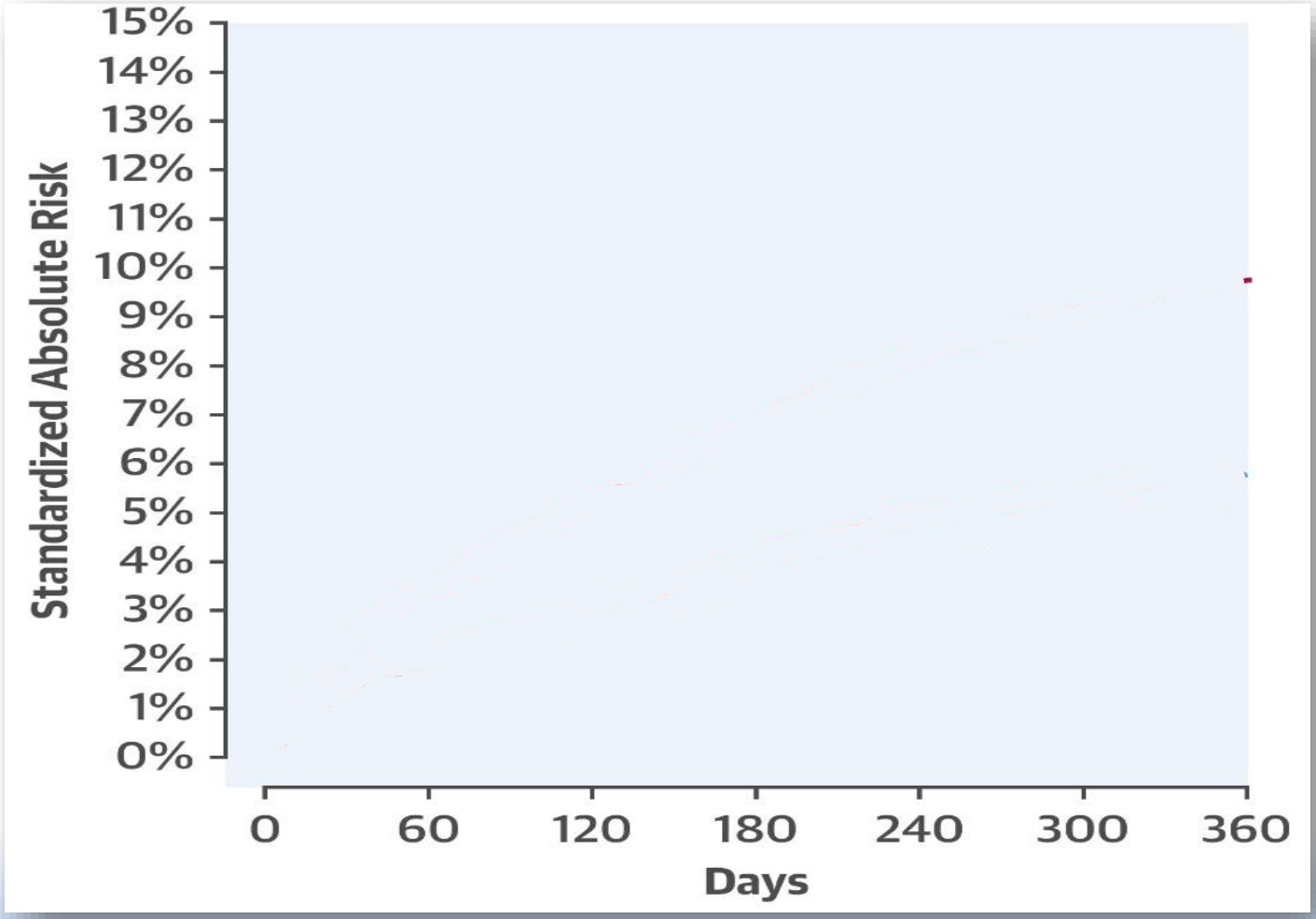
	STEMI $n=3094$					NSTE-ASC $n=3611$				
	Without AF $n=2938$	Pre-existing AF $n=39$	New-onset AF at admission $n=40$	New-onset AF at the CCU $n=77$	*p*-Value	Without AF $n=3407$	Pre-existing AF $n=101$	New-onset AF at admission $n=50$	New-onset AF at the CCU $n=53$	*p*-Value
Reinfarction/infarction (%)	2.7	2.6	2.5	1.3	0.90	2.6	1.0	0	11.3	0.0001
Acute heart failure (%)	2.0	5.7	5.7	7.7	0.004	0.5	2.0	2.0	0	0.11
Acute pulmonary edema (%)	2.1	10.8	2.9	7.7	0.0001	1.2	0	0	8.3	0.0001
Cardiogenic shock (%)	4.3	0	10.8	10.4	0.01	0.9	1.0	2.0	10.2	0.0001
Major bleeding (%)	1.4	2.6	7.5	2.6	0.01	0.5	1.0	2.0	1.9	0.24
Stroke (%)	0.6	2.6	0	2.6	0.08	0.3	0	4.0	1.9	0.0001
In-hospital mortality (%)	8.3	25.6	10.0	15.6	0.0001	2.5	7.9	2.0	17.0	0.0001
CCU stay median (IQR) (days)	5 (3–6)	5 (3–6)	5 (4–7)	6 (4–10)	0.0001	5 (3–6)	5 (3–6)	5 (4–7)	8 (6–11.5)	0.0001

SCA / FA: traitement…

Patterns of pre-admission and discharge antithrombotic treatment among patients with previous atrial fibrillation (CHA_2DS_2-VASc ≥ 2) and coronary artery disease admitted for acute myocardial infarction categorized by treatment type

Am J Cardiol, 2019

Risque de la trithérapie



AVK + DAPT

AVK + SAPT

DOAC + DAPT

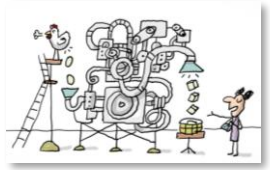
DOAC + SAPT

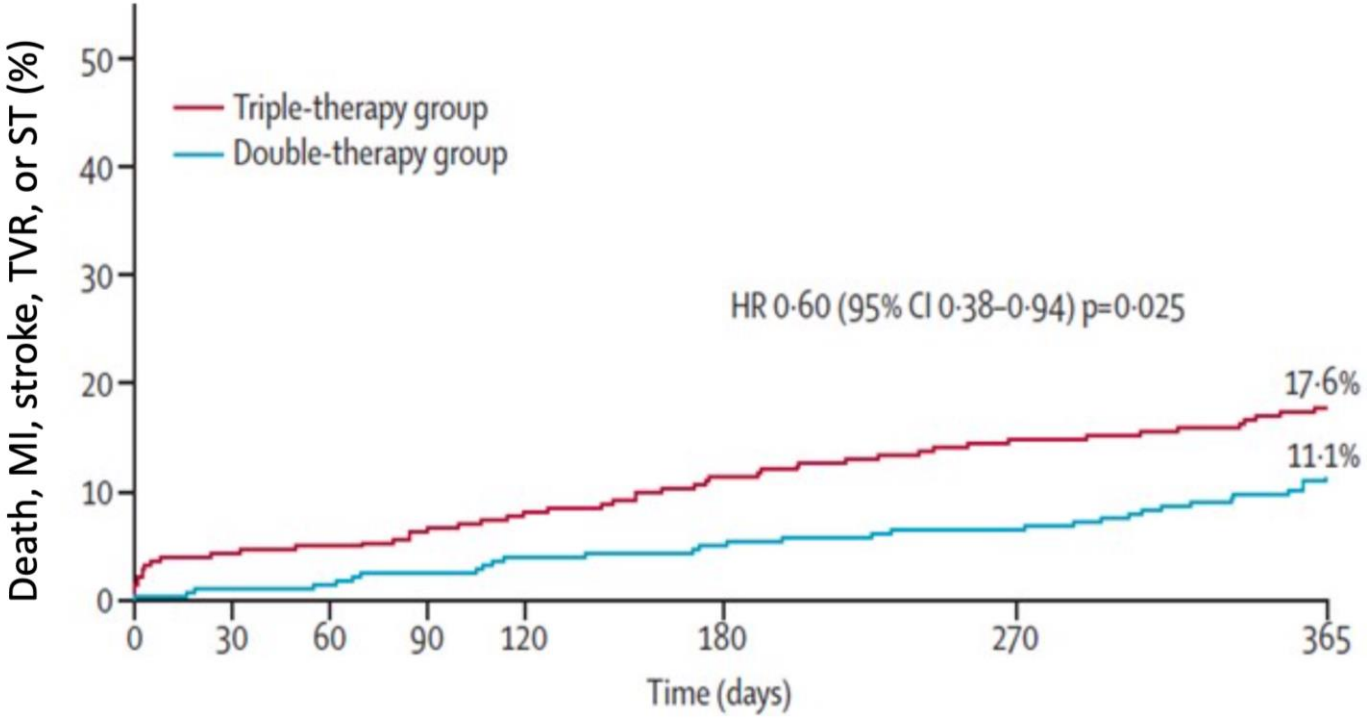
Sindet-Pedersen C *et al*. J Am Coll Cardiol 2018; 72: 1790-800

Bi-thérapie

Use of clopidogrel with or without aspirin in patients taking oral anticoagulant therapy and undergoing percutaneous coronary intervention: an open-label, randomised, controlled trial

Willem J M Dewilde [1], Tom Oirbans, Freek W A Verheugt, Johannes C Kelder, Bart J G L De Smet, Jean-Paul Herrman, Tom Adriaenssens, Mathias Vrolix, Antonius A C M Heestermans, Marije M Vis, Jan G P Tijssen, Arnoud W van 't Hof, Jurriën M ten Berg; WOEST study investigators





AVK + Clopidogrel + Aspirine

AVK + Clopidogrel

WOEST Trial, LANCET 2013

Bi-thérapie

PIONEER-AF PCI

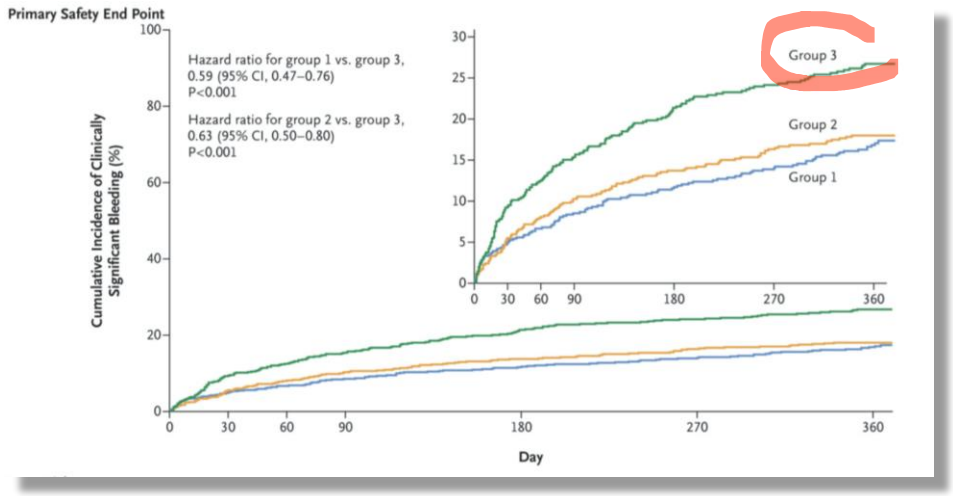
➔ **Groupe 1:**

Rivaroxaban (15 mg/j) +	**- clopidogrel (75 mg/j) ou**	
	- ticagrelor (90 mgx2/j) ou	**12 mois**
	- prasugrel 10 mg/j	

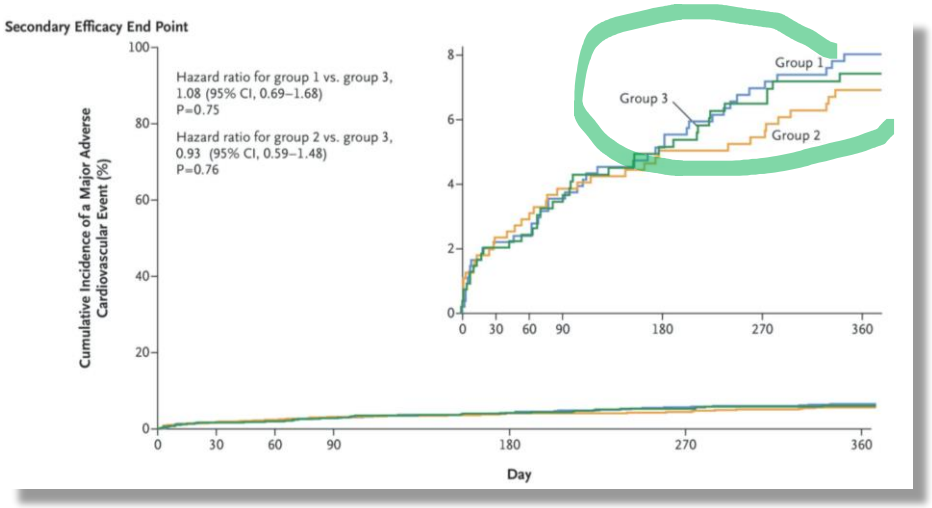
NEJM, 2016

Bi-thérapie

PIONEER-AF PCI



Major bleeding or minor bleeding according to TIMI criteria or bleeding requiring medical attention



Cumulative incidence of MACE (CV death, myocardial infarction, or stroke)

NEJM, 2016

Bi-thérapie

Re-DUAL-PCI

➔ **Groupe 1:**

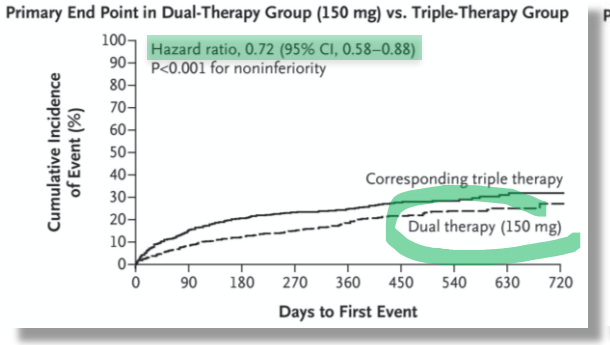
Dabigabran (150 mgx2/j) + **- clopidogrel (75 mg/j) ou**

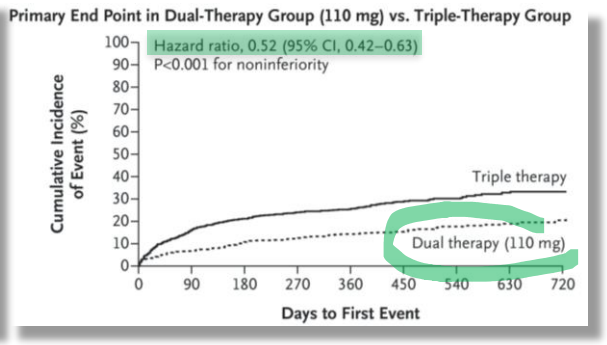
- ticagrelor (90 mgx2/j)

NEJM, 2017

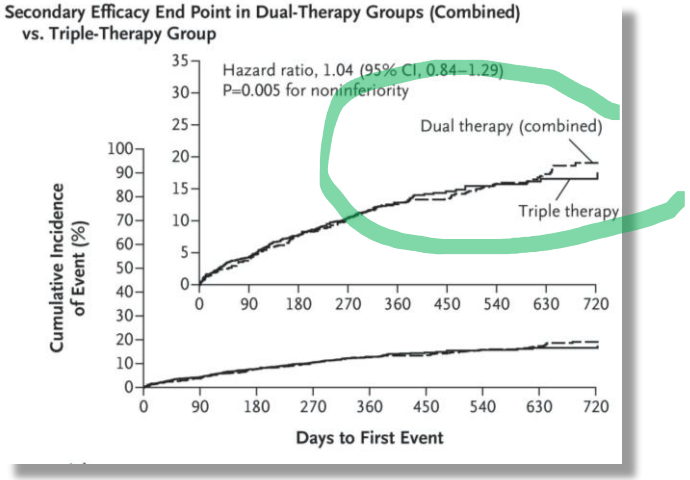
Bi-thérapie

Re-DUAL-PCI





major or clinically relevant nonmajor bleeding



Cumulative incidence of MACE (myocardial infarction, stroke, or systemic embolism), death, or unplanned revascularization

➔ **Réduction de saignements majeurs: Dabigatran (110 mg +++) versus AVKs.**

➔ **Dabigatran non-inférieur pour évènements ischémiques : étude non destinée.**

NEJM, 2017

Bi-thérapie

AUGUSTUS

➔ **Groupe 1:**

Apixaban (2.5 ou 5mgx2/j) +

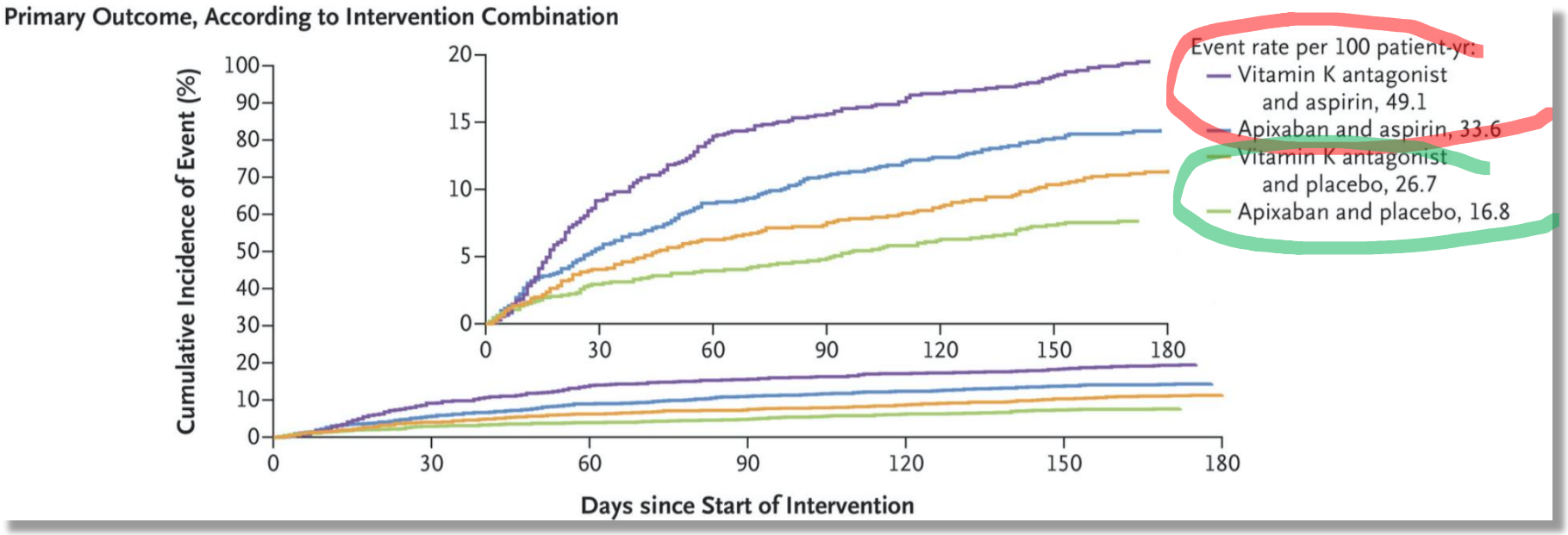
- clopidogrel (75 mg/j) ou

- ticagrelor (90 mgx2/j)

NEJM, 2019

Bi-thérapie

AUGUSTUS

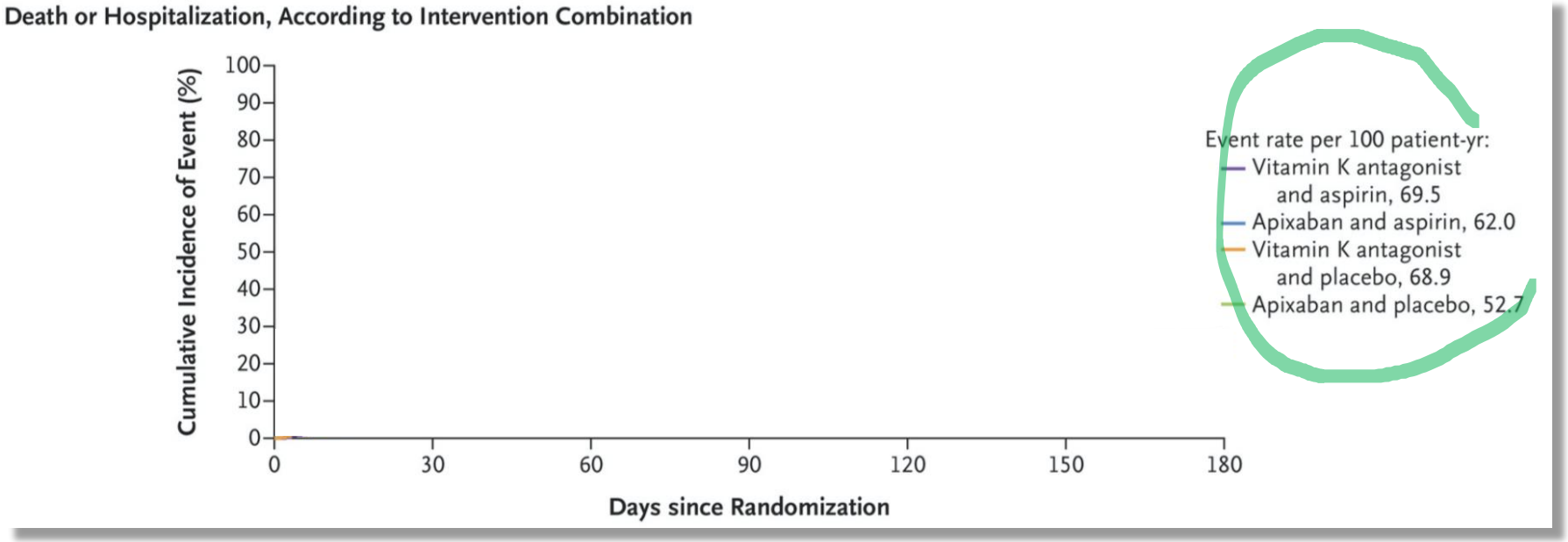


Death // intracranial, intraspinal, intraocular, retroperitoneal, intraarticular, intramuscular with compartment syndrome, or pericardial // decrease > 2 g/dL Hb // transfusion // hospitalization // medical or surgical intervention for bleeding // change in antithrombotic therapy

NEJM, 2019

Bi-thérapie

AUGUSTUS



Composite of death or ischemic events (stroke, myocardial infarction, stent thrombosis [definite or probable], or urgent revascularization)

NEJM, 2019

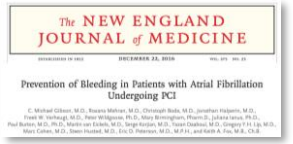
Bi-thérapie


The NEW ENGLAND JOURNAL of MEDICINE

Dual Antithrombotic Therapy with Dabigatran after PCI in Atrial Fibrillation


ORIGINAL ARTICLE

Antithrombotic Therapy after Acute Coronary Syndrome or PCI in Atrial Fibrillation


The NEW ENGLAND JOURNAL of MEDICINE

Prevention of Bleeding in Patients with Atrial Fibrillation Undergoing PCI

Etudes randomisées hétérogènes mais données congruentes et robustes:

➔ Proportion +++ de SCA (37-52%), mais haut risque (TAIS– ATC complexes) sous représentées
➔ Triple thérapie per ATC : 1-14 jours post ATC
➔ Utilisation +++ du clopidogrel (>90%)

➔ Reduction significative des saignements majeurs // importants
➔ Taux idem ou non différents des AIT-AVC
➔ Taux idem ou non différents des IDM
➔ Taux idem ou non différents des thromboses de stents

➔ AUGUSTUS: apixaban (vs. AVK) : <<< AVC-AIT // DC // hospitalisations
➔ AUGUSTUS: placebo (vs. aspirine) et apixaban (vs. AVK) : reduction des saignements

Bi-thérapie


Revisiting the effects of omitting aspirin in combined antithrombotic therapies for atrial fibrillation and acute coronary syndromes or percutaneous coronary interventions: meta-analysis of pooled data from the PIONEER AF-PCI, RE-DUAL PCI, and AUGUSTUS trials

Table 2 Outcomes according to the antithrombotic treatment regimen

	Major ISTH bleeding	Major TIMI bleeding	CRNMB	Minor TIMI bleeding
	Events number/total number (%)			
Safety outcomes				
PIONEER AF-PCI				
All patients (*n* = 2099)	100/2099 (4.8)	46/2099 (2.2)	317/2099 (15.1)	27/2099 (1.3)
R15 + P2Y12	27/696 (3.9)	14/696 (2.0)	90/696 (12.9)	7/696 (1.0)
R2.5 + ASA + P2Y12	25/706 (3.5)	12/706 (1.7)	97/706 (13.7)	7/706 (1.0)
VKA + ASA + P2Y12	48/697 (6.9)	20/697 (2.9)	130/697 (18.7)	13/697 (1.9)
RE-DUAL PCI				
All patients (*n* = 2725)	182/2725 (6.7)	67/2725 (2.5)	387/2725 (14.2)	58/2725 (2.1)
D110 + P2Y12	49/981 (5.0)	14/981 (1.4)	102/981 (10.4)	15/981 (1.6)
VKA + ASA + P2Y12	90/981 (9.2)	37/981 (3.8)	174/981 (17.7)	32/981 (3.2)
D150 + P2Y12	43/763 (5.6)	16/763 (2.1)	111/763 (14.6)	11/763 (1.4)
VKA[a] + ASA + P2Y12	64/764 (8.4)	30/764 (3.9)	132/764 (17.3)	18/764 (2.4)
AUGUSTUS				
All patients (*n* = 4556)	173/4556 (3.8)	84/4556 (1.8)	423/4556 (9.3)	197/4556 (4.3)
TAT (A5/VKA + P2Y12 + ASA)	108/2277 (4.7)	55/2277 (2.4)	275/2277 (12.1)	126/2277 (5.5)
DAT (A5/VKA + P2Y12)	65/2279 (2.9)	29/2279 (1.3)	148/2279 (6.5)	71/2279 (3.1)
All patients (*n* = 4549)	173/4549 (3.8)	86/4549 (1.9)	426/4549 (9.4)	198/4549 (4.4)
A5 + P2Y12 ± ASA	69/2290 (3.0)	38/2290 (1.7)	180/2290 (7.9)	80/2290 (3.5)
VKA + P2Y12 ± ASA	104/2259 (4.6)	48/2259 (2.1)	246/2259 (10.9)	118/2259 (5.2)
Total				
DAT	184/4719 (3.9)	73/4719 (1.5)	451/4719 (9.6)	104/4719 (2.2)
TAT	271/4661 (5.8)	124/4661 (2.7)	676/4661 (14.5)	178/4661 (3.8)
NOAC-based treatment	213/5436 (3.9)	94/5436 (1.7)	580/5436 (10.7)	120/5436 (2.2)
VKA-based treatment	242/3937 (6.1)	105/3937 (2.7)	550/3937 (14.0)	163/3937 (4.1)

EuroPace, 2020

Bi-thérapie


ESC CLINICAL RESEARCH

Revisiting the effects of omitting aspirin in combined antithrombotic therapies for atrial fibrillation and acute coronary syndromes or percutaneous coronary interventions: meta-analysis of pooled data from the PIONEER AF-PCI, RE-DUAL PCI, and AUGUSTUS trials

Table 2 Outcomes according to the antithrombotic treatment regimen

	Stroke	Myocardial infarction	Stent thrombosis[b]	Pooled ischaemic events[c]
	Events number/total number (%)			
Efficacy outcomes				
PIONEER AF-PCI				
All patients ($n = 2093$)	25/2093 (1.2)	57/2093 (2.7)	15/2093 (0.7)	72/2093 (3.4)
R15 + P2Y12	8/694 (1.2)	19/694 (2.7)	5/694 (0.7)	24/694 (3.8)
R2.5 + P2Y12 + ASA	10/704 (1.4)	17/704 (2.4)	6/704 (0.9)	23/704 (3.3)
VKA + P2Y12 + ASA	7/695 (1.0)	21/695 (3.0)	4/695 (0.6)	25/695 (3.6)
RE-DUAL PCI				
All patients ($n = 2725$)	39/2725 (1.4)	99/2725 (3.6)	30/2725 (1.1)	129/2725 (4.7)
D110 + P2Y12	17/981 (1.7)	44/981 (4.5)	15/981 (1.5)	59/981 (6.0)
VKA + ASA + P2Y12	13/981 (1.3)	29/981 (3.0)	8/981 (0.8)	37/981 (3.8)
D150 + P2Y12	9/763 (1.2)	26/763 (3.4)	7/763 (0.9)	33/763 (4.3)
VKA[a] + ASA + P2Y12	8/764 (1.0)	22/764 (2.9)	7/764 (0.9)	29/764 (3.8)
AUGUSTUS				
All patients ($n = 4614$)	39/4614 (0.9)	152/4614 (3.3)	32/3517 (0.9)	142/4614 (3.1)
TAT (A5/VKA + P2Y12 + ASA)	20/2307 (0.9)	68/2307 (2.9)	11/1760 (0.6)	65/2307 (2.8)
DAT (A5/VKA + P2Y12)	19/2307 (0.8)	84/2307 (3.6)	21/1757 (1.2)	77/2307 (3.3)
All patients ($n = 4614$)	39/4614 (0.9)	152/4614 (3.3)	32/3517 (0.9)	142/4614 (3.1)
A5 + P2Y12 (± ASA)	13/2306 (0.6)	72/2306 (3.1)	14/1759 (0.8)	66/2306 (2.9)
VKA + P2Y12 (± ASA)	26/2308 (1.1)	80/2308 (3.5)	18/1758 (1.0)	76/2308 (3.3)
Total				
DAT	53/4745 (1.1)	173/4745 (3.6)	48/4195 (1.1)	193/4745 (4.1)
TAT	50/4687 (1.1)	135/4687 (2.9)	29/4140 (0.7)	150/4687 (3.2)
NOAC-based treatment	57/5448 (1.0)	178/5448 (3.3)	47/4901 (1.0)	205/5448 (3.8)
VKA-based treatment	46/3984 (1.2)	130/3984 (3.3)	30/3434 (0.9)	138/3984 (3.5)

EuroPace, 2020

Bi-thérapie

Table 2 Outcomes according to the antithrombotic treatment regimen

	Stroke	Myocardial infarction	Stent thrombosis[b]	Pooled ischaemic events[c]
	Events number/total number (%)			
Efficacy outcomes				
PIONEER AF-PCI				
All patients ($n = 2093$)	25/2093 (1.2)	57/2093 (2.7)	15/2093 (0.7)	72/2093 (3.4)
R15 + P2Y12	8/694 (1.2)	19/694 (2.7)	5/694 (0.7)	24/694 (3.8)
R2.5 + P2Y12 + ASA	10/704 (1.4)	17/704 (2.4)	6/704 (0.9)	23/704 (3.3)
VKA + P2Y12 + ASA	7/695 (1.0)	21/695 (3.0)	4/695 (0.6)	25/695 (3.6)
RE-DUAL PCI				
All patients ($n = 2725$)	39/2725 (1.4)	99/2725 (3.6)	30/2725 (1.1)	129/2725 (4.7)
D110 + P2Y12	17/981 (1.7)	44/981 (4.5)	15/981 (1.5)	59/981 (6.0)
VKA + ASA + P2Y12	13/981 (1.3)	29/981 (3.0)	8/981 (0.8)	37/981 (3.8)
D150 + P2Y12	9/763 (1.2)	26/763 (3.4)	7/763 (0.9)	33/763 (4.3)
VKA[a] + ASA + P2Y12	8/764 (1.0)	22/764 (2.9)	7/764 (0.9)	29/764 (3.8)
AUGUSTUS				
All patients ($n = 4614$)	39/4614 (0.9)	152/4614 (3.3)	32/3517 (0.9)	142/4614 (3.1)
TAT (A5/VKA + P2Y12 + ASA)	20/2307 (0.9)	68/2307 (2.9)	11/1760 (0.6)	65/2307 (2.8)
DAT (A5/VKA + P2Y12)	19/2307 (0.8)	84/2307 (3.6)	21/1757 (1.2)	77/2307 (3.3)
All patients ($n = 4614$)	39/4614 (0.9)	152/4614 (3.3)	32/3517 (0.9)	142/4614 (3.1)
A5 + P2Y12 (± ASA)	13/2306 (0.6)	72/2306 (3.1)	14/1759 (0.8)	66/2306 (2.9)
VKA + P2Y12 (± ASA)	26/2308 (1.1)	80/2308 (3.5)	18/1758 (1.0)	76/2308 (3.3)
Total				
DAT	53/4745 (1.1)	173/4745 (3.6)	48/4195 (1.1)	193/4745 (4.1)
TAT	50/4687 (1.1)	135/4687 (2.9)	29/4140 (0.7)	150/4687 (3.2)
NOAC-based treatment	57/5448 (1.0)	178/5448 (3.3)	47/4901 (1.0)	205/5448 (3.8)
VKA-based treatment	46/3984 (1.2)	130/3984 (3.3)	30/3434 (0.9)	138/3984 (3.5)

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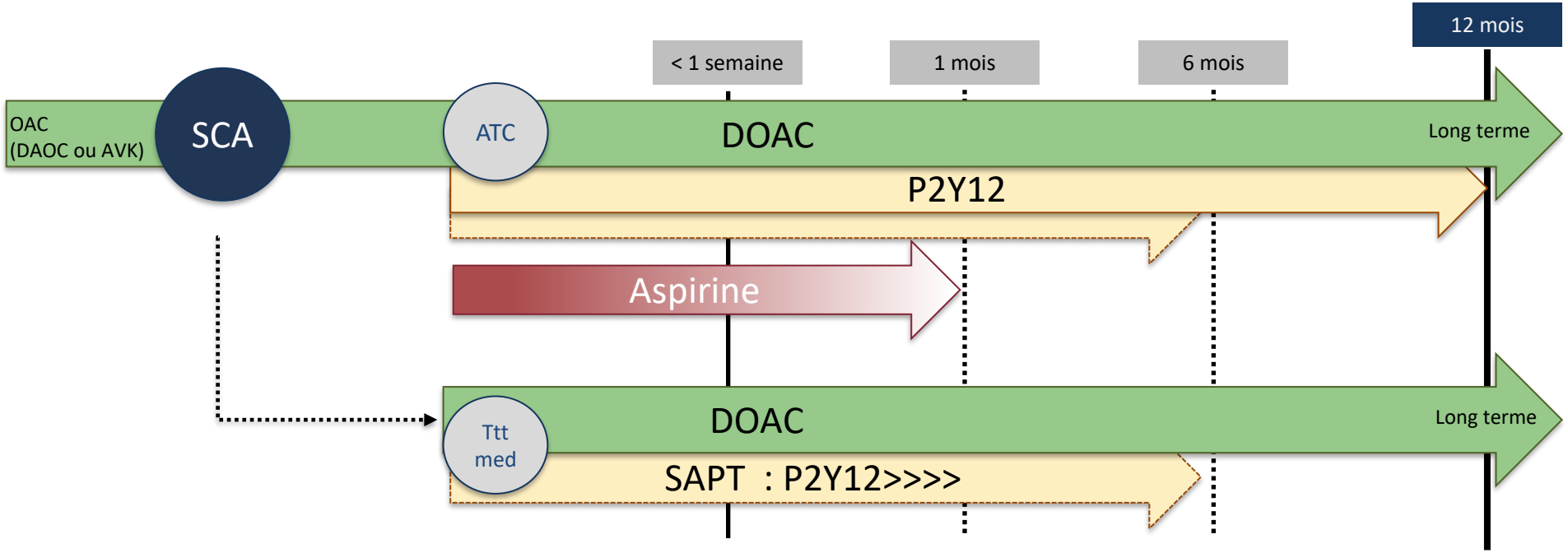
Stratégie générale



EuroPace, 2020

Evaluation des risques

Thrombose intra-stent

Accidents athéro-thrombotiques

Hémorragies <=> ACO

Hémorragies <=> AAP

Hémorragies <=> AAP // ACO

Risque de thrombose

Risque hemorragique

CHADS VASc

Élément	Score
Insuffisance cardiaque / dysfonction VG	1
Hypertension	1
Age ≥ 75 ans	2
Diabète	1
AVC / AIT ou embolie périphérique	2
Pathologie vasculaire (IDM, vasc. périph. ou plaque de l'aorte)	1
Âge 65-74 ans	1
Sexe féminin	1
Score maximum	9

HAS BLED

Recommandations

Recommendations for patients with AF and an ACS, PCI, or CCS[1068]

General recommendations for patients with AF and an indication for concomitant antiplatelet therapy	Class[a]	Level[b]
	I	A
	IIa	B
	IIa	B
	IIa	B
Recommendations for AF patients with ACS		
	I	A
	IIa	C

Autres considérations

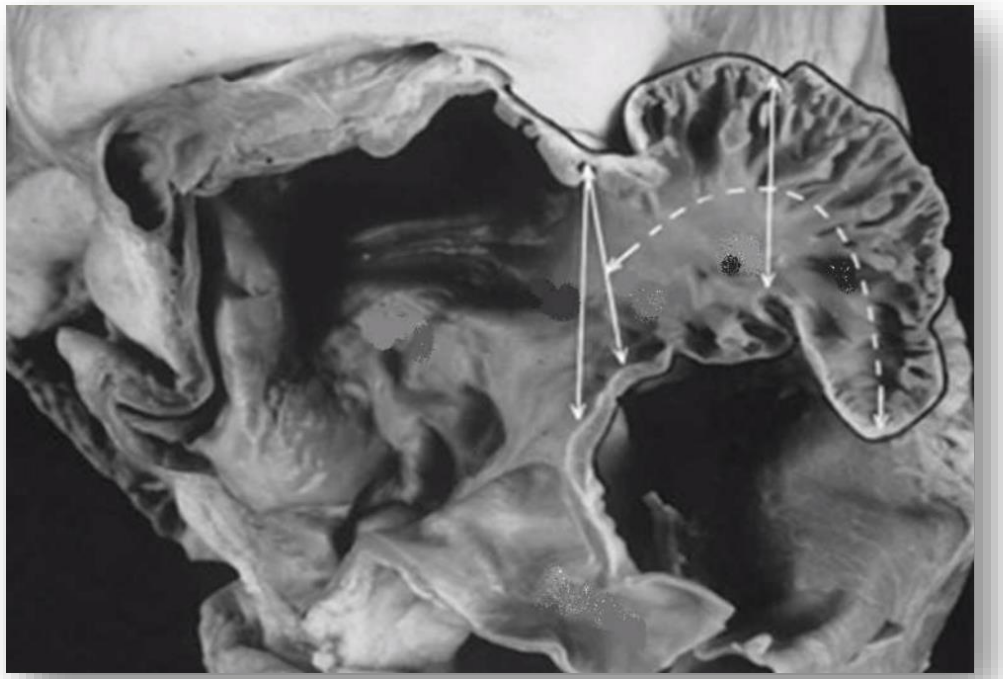
➔ Contrôle de la FC +++
  ➔ BB- ou ACa++ bradycardisants

➔ Instabilité hémodynamique:
  ➔ Discuter CEE

➔ Anti-arythmiques
  ➔ Rythmol – Flecaine : CI

➔ ……. LAA occlusion?

LAA occlusion



Aile de poulet
Chaussette
Chou-fleur
Cactus

LAA occlusion

FA et AVC

- 15 à 20 % des AVC ischémiques
- 30% si > 60 ans
- 90% des thrombus: auricule gauche

Indication LAA occlusion

HAS

- FA non valvulaire
- Haut risque thromboembolique (score CHA2DS2-VASc ≥ 3)
- CI formelle/permanente ACO (validée par comité pluridisciplinaire)

LAA occlusion

AMPLATZER CARDIAC PLUG

WATCHMAN

Traitement post occlusion

Antithrombotic therapy after left atrial appendage occlusion

Device/patient	Aspirin	OAC	Clopidogrel	Comments
Watchman/low bleeding risk	75 - 325 mg/day indefinitely	Start warfarin after procedure (target INR 2 - 3) until 45 days or continue until adequate LAA sealing is confirmed[a] by TOE. NOAC is a possible alternative	Start 75 mg/day when OAC stopped, continue until 6 months after the procedure	Some centres do not withhold OAC at the time of procedure (no data to support/deny this approach)
Watchman/high bleeding risk	75 - 325 mg/day indefinitely	None	75 mg/day for 1 - 6 months while ensuring adequate LAA sealing[a]	Clopidogrel often given for shorter time in very high-risk situations
ACP/Amulet	75 - 325 mg/day indefinitely	None	75 mg/day for 1 - 6 months while ensuring adequate LAA sealing[a]	Clopidogrel may replace long-term aspirin if better tolerated

Conclusions -1-

FA et coronaropathie // SCA

Premier mois :

- **Aspirine + Plavix, durée maximale de 1 mois post ATC, uniquement pour les patients à bas risque hémorragique**
- **AOD >>>> AVK.**

Après 1 mois:

- **Arrêt de la bithérapie antiagrégante // Clopidogrel >>>>> Ticagrélor ou Prasugrel.**
- **ACO en privilégiant les AOD**

Conclusions -1-

FA et coronaropathie // SCA

Après 12 mois:

- **Arrêt des AAP**
- **AOD >>> AVK**
- **…, évaluation du risque ischémique ++++ :**

  ➔ si haut risque ischémique et bas risque hémorragique, maintien du Clopidogrel au long cours peut être proposé (ESC).

Etudes randomisées en cours pour optimiser cette stratégie // situations toujours extrêmement complexes.

Conclusions -2-