



Session recommandations

HTA

Experts Prs J. Ferrières & C. Brasselet

Samedi 04 10 2014

XIV^{ème} Congrès SFMV - MONTPELLIER 2014

Epidemiologie

- AVC - AIT / IDM / MS / Ins. C / ACOMI / Ins. rénale
-

Définitions

Category	Systolic		Diastolic
Optimal	<120	and	<80
Normal		and/or	
High normal		and/or	
Grade 1 hypertension		and/or	
Grade 2 hypertension		and/or	
Grade 3 hypertension		and/or	
Isolated systolic hypertension		and	

HTA et risque CV global

- Niveaux de TA

F R C V

Risk factors
Male sex
Age (men ≥ 55 years; women ≥ 65 years)
Smoking
Dyslipidaemia
Total cholesterol >4.9 mmol/L (190 mg/dL), and/or
Low-density lipoprotein cholesterol >3.0 mmol/L (115 mg/dL), and/or
High-density lipoprotein cholesterol: men <1.0 mmol/L (40 mg/dL), women <1.2 mmol/L (46 mg/dL), and/or
Triglycerides >1.7 mmol/L (150 mg/dL)
Fasting plasma glucose 5.6–6.9 mmol/L (102–125 mg/dL)
Abnormal glucose tolerance test
Obesity [BMI ≥ 30 kg/m ² (height ²)]
Abdominal obesity (waist circumference: men ≥ 102 cm; women ≥ 88 cm) (in Caucasians)
Family history of premature CVD (men aged <55 years; women aged <65 years)

Retentissement

Asymptomatic organ damage

Pulse pressure (in the elderly) ≥ 60 mmHg

Electrocardiographic LVH (Sokolow–Lyon index >3.5 mV; RaVL >1.1 mV; Cornell voltage duration product >244 mV*ms), or

Echocardiographic LVH [LVM index: men >115 g/m²; women >95 g/m² (BSA)]^a

Carotid wall thickening (IMT >0.9 mm) or plaque

Carotid–femoral PWV >10 m/s

Ankle-brachial index <0.9

CKD with eGFR 30–60 mL/min/1.73 m² (BSA)

Microalbuminuria (30–300 mg/24 h), or albumin–creatinine ratio (30–300 mg/g; 3.4–34 mg/mmol) (preferentially on morning spot urine)

Established CV or renal disease

Cerebrovascular disease: ischaemic stroke; cerebral haemorrhage; transient ischaemic attack

CHD: myocardial infarction; angina; myocardial revascularization with PCI or CABG

Heart failure, including heart failure with preserved EF

Symptomatic lower extremities peripheral artery disease

CKD with eGFR <30 mL/min/1.73m² (BSA); proteinuria (>300 mg/24 h).

Advanced retinopathy: haemorrhages or exudates, papilloedema

Niveau de risque

PSAs - PSAd - FRCV - atteinte AΣ - néphropathie - Diabète - Mdie CV

		Low risk	Moderate risk	High risk
	Low risk	Moderate risk	Moderate to high risk	High risk
	Low to Moderate risk	Moderate to high risk	High Risk	High risk
	Moderate to high risk	High risk	High risk	High to very high risk
	Very high risk	Very high risk	Very high risk	Very high risk

Définition

Category	Systolic BP (mmHg)		Diastolic BP (mmHg)
Office BP	≥140	and/or	≥90
Ambulatory BP			
Daytime (or awake)	≥135	and/or	≥85
Nighttime (or asleep)	≥120	and/or	≥70
24-h	≥130	and/or	≥80
Home BP	≥135	and/or	≥85

Blouse blanche

- 13 → 30%
- Age - Femmes - Non fumeurs
- Prévalence ↘ : atteinte viscérale - mesures répétées - IDE
- Prévalence et niveau HTA: 55% si HTA grade 1
 10% si HTA grade 3
- Pronostic long terme: intermédiaire normo/hyper - tendus
- → Surveillance rapprochée

HTA masquée

- 10 → 17%
- Jeune age - Garçons - Non fumeurs - tabac - alcool - sportifs - anxiété - obésité - diabète - néphropathie,...
- Associée à d'autres FRCV - atteintes AΣ
→ sur-risque HTA et DNID
- Evènements cardiovasculaires: - x2 normo-tendus
- idem HTA confirmée

Bilan

- Examen clinique complet (retentissement et causes)
- Mesure TA (2x2)
- Historique familial

Extended evaluation (mostly domain of the specialist)

- Further search for cerebral, cardiac, renal, and vascular damage, mandatory in resistant and complicated hypertension.
- Search for secondary hypertension when suggested by history, physical examination, or routine and additional tests.
potassium and sodium concentration and other factors.
- Home and 24-h ambulatory BP monitoring.
- Echocardiogram.
- Holter monitoring in case of arrhythmias.
- Exercise testing.
- Carotid ultrasound.
- Peripheral artery/abdominal ultrasound.
- Pulse wave velocity.
- Ankle-brachial index.

Traitement (s)

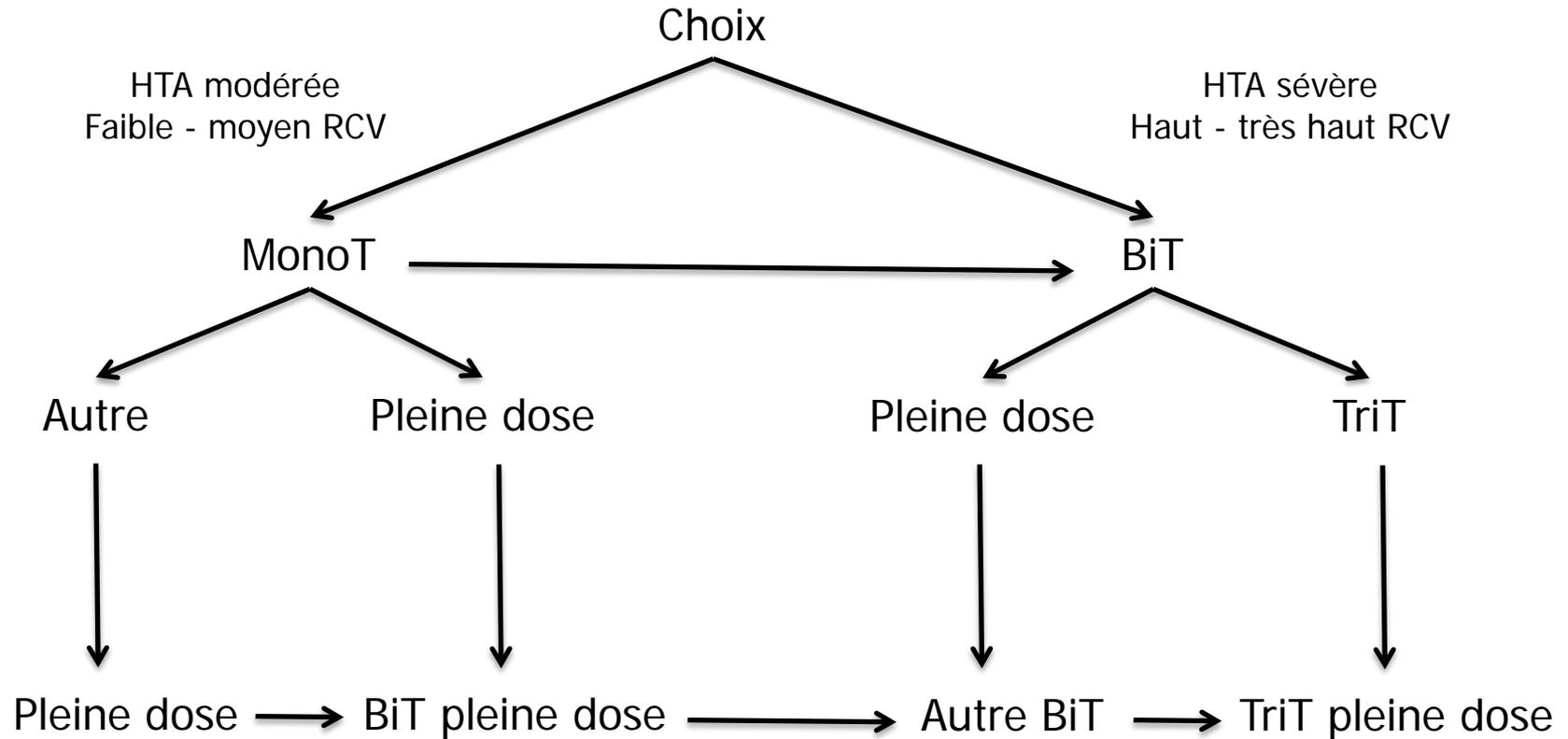
- Grade 2-3; Grade 1 à haut risque: Ttt
- Grade 1 à risque bas → moyen: Hygiène → Ttt
- HTAS du jeune (>160; < 90): Surveillance + + +
- Sujets agés: >160 → Ttt

- TA normale haute: Pas de Ttt

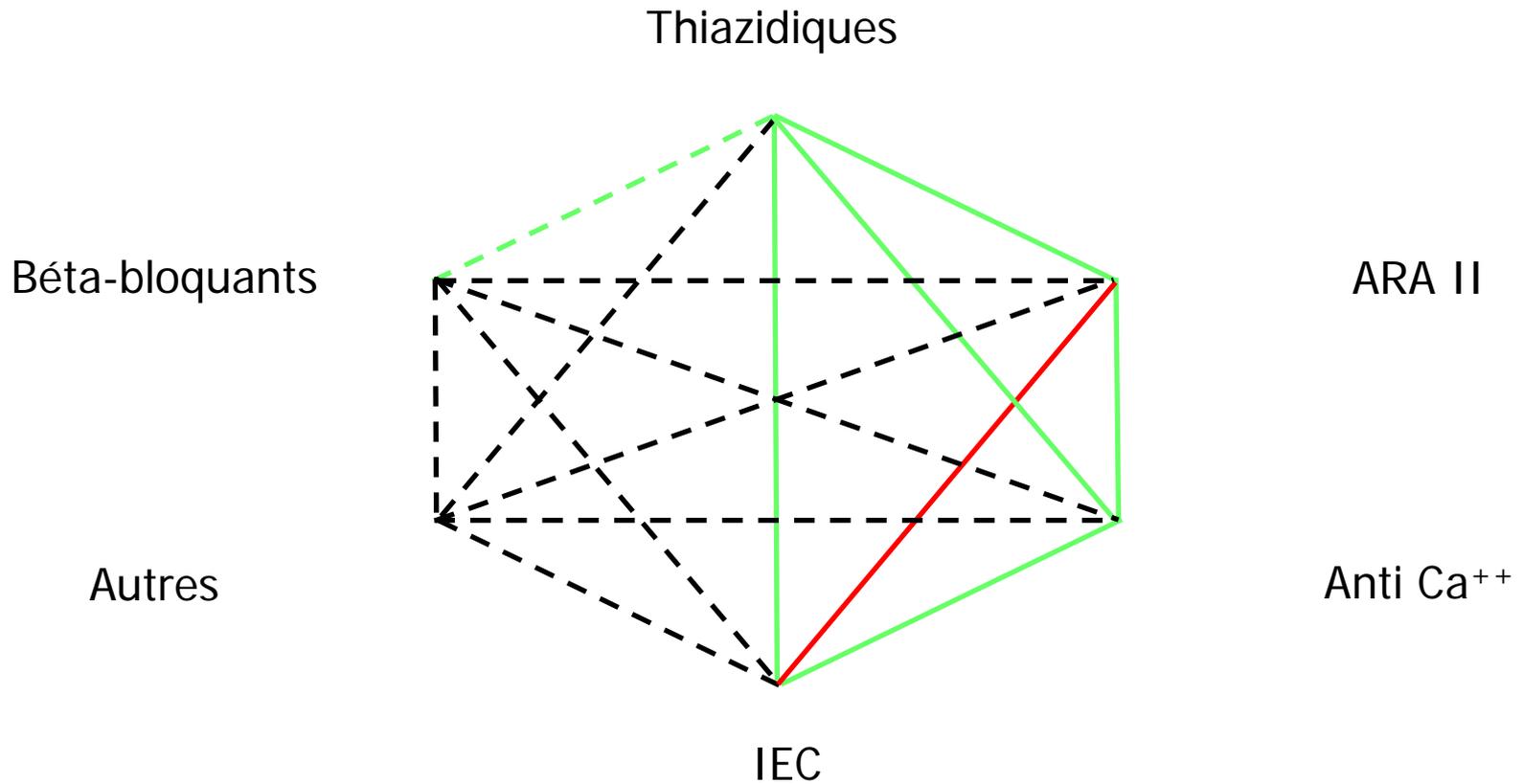
Traitement (s)

Other risk factors, asymptomatic organ damage or disease	Blood Pressure (mmHg)			
	High normal SBP 130–139 or DBP 85–89	Grade 1 HT SBP 140–159 or DBP 90–99	Grade 2 HT SBP 160–179 or DBP 100–109	Grade 3 HT SBP ≥180 or DBP ≥110
No other RF	• No BP intervention	• Lifestyle changes for several months • Then add BP drugs targeting <140/90	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
1–2 RF	• Lifestyle changes • No BP intervention	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
≥3 RF	• Lifestyle changes • No BP intervention	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
OD, CKD stage 3 or diabetes	• Lifestyle changes • No BP intervention	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
Symptomatic CVD, CKD stage ≥4 or diabetes with OD/RFs	• Lifestyle changes • No BP intervention	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90

Traitement (s)



Traitement (s)



Conclusions

- Auto mesure // MAPA



Merci

Back-up Slides - 1 -

Traitements

Should antihypertensive agents be ranked in order of choice?

Once it is agreed that (i) the major mechanism of the benefits of antihypertensive therapy is lowering of BP *per se*, (ii) the effects on cause-specific outcomes of the various agents are similar or differ by only a minor degree, (iii) the type of outcome in a given patient is unpredictable, and (iv) all classes of antihypertensive agents have their advantages but also contra-indications (Table 14), it is obvious that any all-purpose ranking of drugs for general antihypertensive usage is not evidence-based.

Back-up Slides -2-

Traitements → OD

Asymptomatic organ damage	
LVH	ACE inhibitor, calcium antagonist, ARB
Asymptomatic atherosclerosis	Calcium antagonist, ACE inhibitor
Microalbuminuria	ACE inhibitor, ARB
Renal dysfunction	ACE inhibitor, ARB

Back-up Slides -3-

Traitements et Femmes

Recommendations	Class ^a	Level ^b
Hormone therapy and selective oestrogen receptor modulators are not recommended and should not be used for primary or secondary prevention of CVD. If treatment of younger perimenopausal women is considered for severe menopausal symptoms, the benefits should be weighed against potential risks.	III	A
Drug treatment of severe hypertension in pregnancy (SBP >160 mmHg or DBP >110 mmHg) is recommended.	I	C
Drug treatment may also be considered in pregnant women with persistent elevation of BP \geq 150/95 mmHg, and in those with BP \geq 140/90 mmHg in the presence of gestational hypertension, subclinical OD or symptoms.	IIb	C

In women at high risk of pre-eclampsia, provided they are at low risk of gastrointestinal haemorrhage, treatment with low dose aspirin from 12 weeks until delivery may be considered.	IIb	B
In women with child-bearing potential RAS blockers are not recommended and should be avoided.	III	C
Methyldopa, labetalol and nifedipine should be considered preferential antihypertensive drugs in pregnancy. Intravenous labetalol or infusion of nitroprusside should be considered in case of emergency (pre-eclampsia).	IIa	B

Back-up Slides -4-

Traitements et Diabète

Recommendations	Class ^a	Level ^b	Ref. ^c
While initiation of antihypertensive drug treatment in diabetic patients whose SBP is ≥ 160 mmHg is mandatory, it is strongly recommended to start drug treatment also when SBP is ≥ 140 mmHg.	I	A	275,276 290-293
A SBP goal < 140 mmHg is recommended in patients with diabetes.	I	A	270,275, 276,295
The DBP target in patients with diabetes is recommended to be < 85 mmHg.	I	A	290, 293
All classes of antihypertensive agents are recommended and can be used in patients with diabetes; RAS blockers may be preferred, especially in the presence of proteinuria or microalbuminuria.	I	A	394,513
It is recommended that individual drug choice takes comorbidities into account.	I	C	-
Simultaneous administration of two blockers of the RAS is not recommended and should be avoided in patients with diabetes.	III	B	433

Back-up Slides -5-

Traitements et A.A.P.

Antiplatelet therapy, in particular low-dose aspirin, is recommended in hypertensive patients with previous CV events.	I	A
Aspirin should also be considered in hypertensive patients with reduced renal function or a high CV risk, provided that BP is well controlled.	IIa	B
Aspirin is not recommended for CV prevention in low-moderate risk hypertensive patients, in whom absolute benefit and harm are equivalent.	III	A

Back-up Slides -6-

Implications

Recommendations	Class ^a	Level ^b
In asymptomatic subjects with hypertension but free of CVD, CKD, and diabetes, total CV risk stratification using the SCORE model is recommended as a minimal requirement.	I	B
As there is evidence that OD predicts CV death independently of SCORE, a search for OD should be considered, particularly in individuals at moderate risk.	IIa	B
It is recommended that decisions on treatment strategies depend on the initial level of total CV risk.	I	B

Back-up Slides -7-

Retentissements

Fundoscopy

Examination of the retina should be considered in difficult to control or resistant hypertensive patients to detect haemorrhages, exudates, and papilloedema, which are associated with increased CV risk.

IIa

Examination of the retina is not recommended in mild-to-moderate hypertensive patients without diabetes, except in young patients.

III

Brain

In hypertensive patients with cognitive decline, brain magnetic resonance imaging or computed tomography may be considered for detecting silent brain infarctions, lacunar infarctions, microbleeds, and white matter lesions.

IIb

imaging stress test (stress echocardiography, stress cardiac magnetic resonance or nuclear scintigraphy) is recommended.