Mot de passe du 23 novembre 2013 : rein2311
Password, November 23rd, 2013 : rein2311

HTA chez le patient âgé

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Objectifs

- Déterminer les cibles tensionnelles chez le patient âgé;
- Différencier les personnes âgées hypertendues qui devraient être traitées de celles qui ne devraient pas être traitées;
- Évaluer les risques associés au traitement antihypertensif chez la population âgée.

Cas particulier de la personne âgée hypertendue

-Changements dans la forme de l'onde de pouls

-Rigidité vasculaire et la pseudo-HTA

Les limites de la TA périphérique

- TA périphérique: brachiale, méthode oscillométrique ou auscultatoire.
  - Ne mesure que le pic (systol) et le creux (diastol) de la TA périphérique.

- LIMITATIONS:

  - 1) La TA périphérique ne représente pas bien la forme de l'onde de pouls ni la TA centrale à cause des phénomènes d'amplifications et de réflexion qui sont en plus modulés par le niveau de rigidité artérielle.

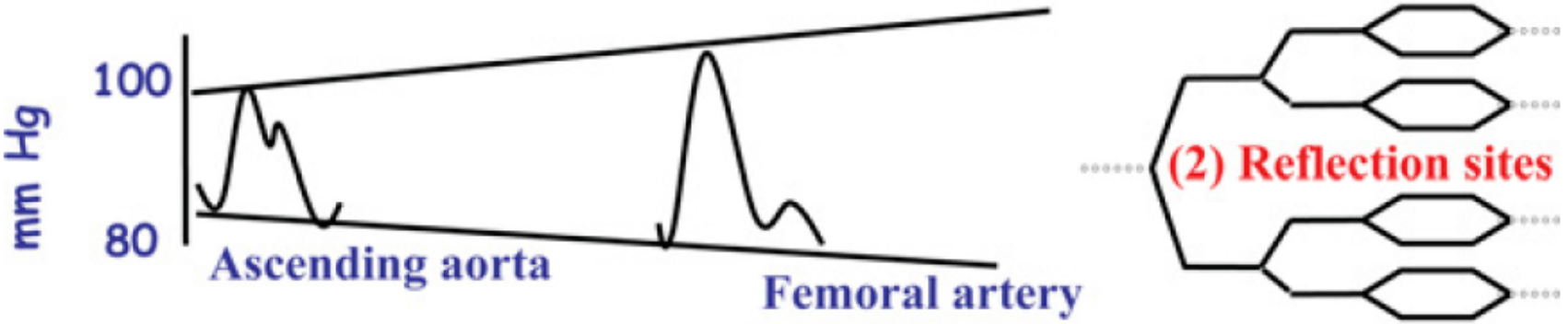
  - 2) La TA centrale semble un meilleur prédicteur des événements cardiovasculaires.

  - 3) Pour une même diminution de TA périphérique, les RX anti-HTA peuvent avoir un effet différent sur la TA centrale.

Mayo Clin Proc. 2010;85(5):460-472

PRESSURE WAVE TRAVELLING

(1) Blood pressure propagation (PWV)



(3) Reflected wave
(Summation of incident and reflected waves)

La tonométrie d'aplanation

- La tonométrie d'aplanation (TOA) est une méthode non invasive qui permet d'étudier la forme de l'onde de pouls et peut s'appliquer à toutes les artères ayant une distribution superficielle.

- On peut ainsi obtenir:
  - La TA centrale aortique (tonométrie radiale)
  - Index d'augmentation (de la TAS centrale) (une mesure de la distance des sites de réflexions de la TA, un indice de la vasodilatation des vaisseaux de résistances et de la rigidité artérielle) (tonométrie radiale)
  - Fémoral - carotide Pulse Wave Velocity (PWV): la vitesse de l'onde de pouls (une mesure fiable de la rigidité artérielle) (tonométrie carotidienne et fémorale).

Mayo Clin Proc. 2010;85(5):460-472

La tonométrie d'aplanation

- Le calcul de la TA centrale en utilisant le TOA a été validé en mesurant simultanément la TA périphérique et la TOA radiale et la TA centrale aortique chez des patients sous anesthésie générale, juste avant de procéder à une CEC pour une chirurgie cardiaque élective.

(*Hypertension*. 2001;38:932-937.)

Mayo Clin Proc. 2010;85(5):460-472

FIGURE 2. Applanation tonometry is performed by placing a pressure sensor over the radial artery. Pictured is the SphygmoCor device (AtCor Medical, Sydney, Australia).

TA centrale et forme de l'onde de pouls

- La TA centrale: Résulte de la somme de la pression d'éjection du sang du cœur et de la pression générée par l'onde de réflexion.

- La forme de l'onde de TA centrale dépend donc de 3 facteurs:
  - L'amplitude et la durée de l'éjection ventriculaire
  - L'amplitude de l'onde réfléchie
  - La vitesse de l'onde réfléchie

- Exemples:
  - FC basse ou petite stature ou rigidité vasculaire: le retour de l'onde de pouls se fait plus tôt dans le cycle cardiaque (systole).
  - FC normal ou grande stature et souplesse vasculaire: le retour de l'onde de pouls se fait plus tardivement dans le cycle cardiaque (diastole).

Mayo Clin Proc. 2010;85(5):460-472

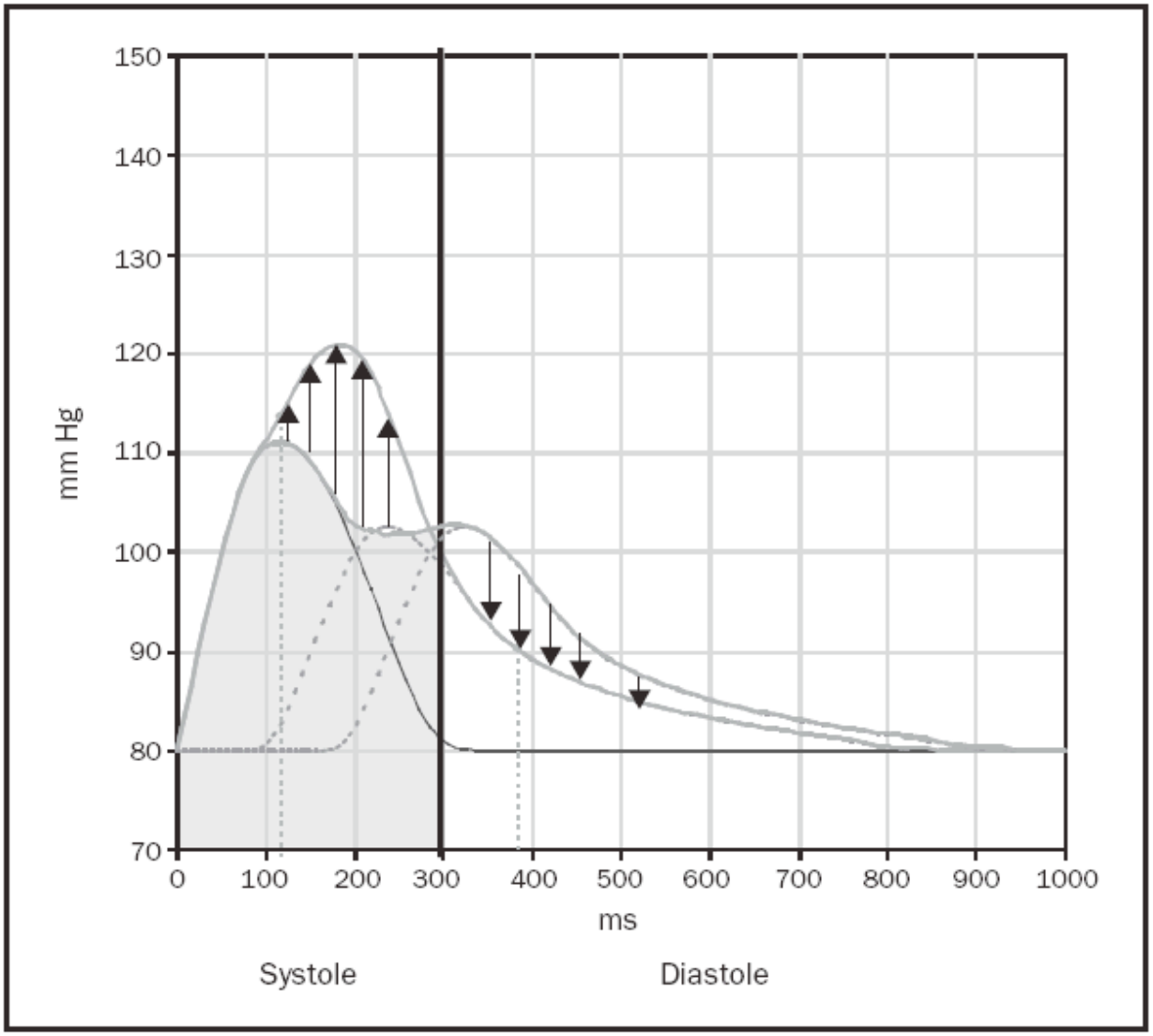


FIGURE 4. Reflection of the pulse wave during the systolic period leads to an increase in left ventricular workload (black upward arrows) and a decrease in the diastolic pressure (black downward arrows). Reflection of the pulse wave during the diastolic period leads to a decrease in ventricular workload and an increase in diastolic pressures.

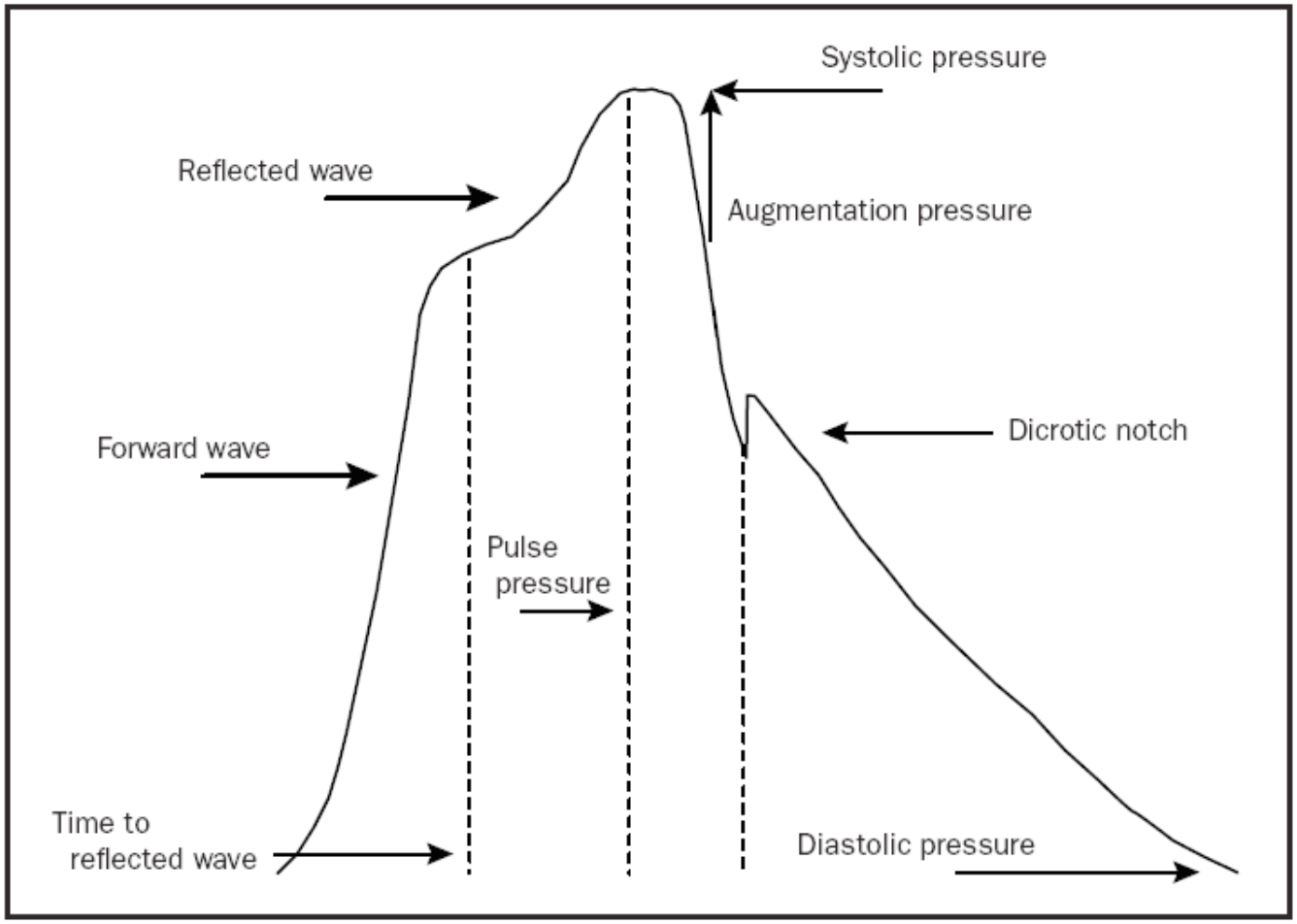
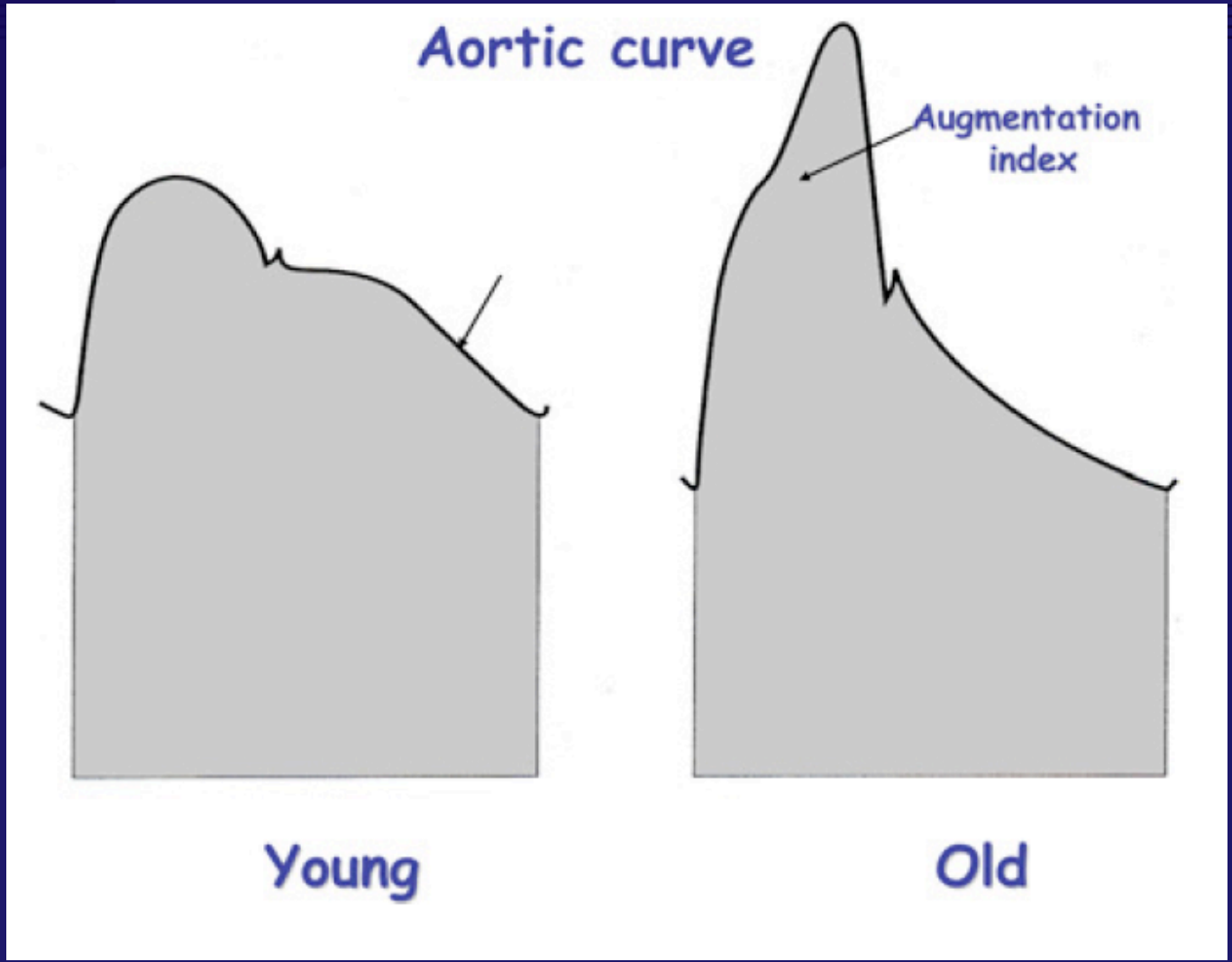


FIGURE 5. Central pulse pressure waveform. Systolic and diastolic pressures are the peak and trough of the waveform. Augmentation pressure is the additional pressure added to the forward wave by the reflected wave. Augmentation index is the ratio between augmentation pressure and central pulse pressure. The dicrotic notch represents closure of the aortic valve and is used to calculate ejection duration. Time to wave reflection is calculated at the point of rise in the initial ejection wave to the onset of the reflected wave. The reflected wave in this central pressure waveform results in augmentation of systolic flow.



Clinical Science (2009) **116**, 273–282

Pseudohypertension

- TA faussement élevée par méthode oscillométrique ou auscultatoire.
- Vaisseaux non-compressibles par calcification vasculaire et ASO étendu:
  - Phénomène de OSLER: Pression plus forte que la TA est requise pour comprimer l'artère brachiale.

Blood Pressure. 2005; 14 (Suppl 2): 42–45
Journal of Hypertension 2005, **23**:1441–1444
N Engl J Med 2006;355:385-92.
J Cardiovasc Pharmacol Ther 2006; 11; 113
American Journal of Therapeutics 10, 122–126 (2003)

Pseudohypertension

* brachial artery stiffnes (arteriosclerosis muscularis) + calcification

* measurement result = RR + arterial wall resistance

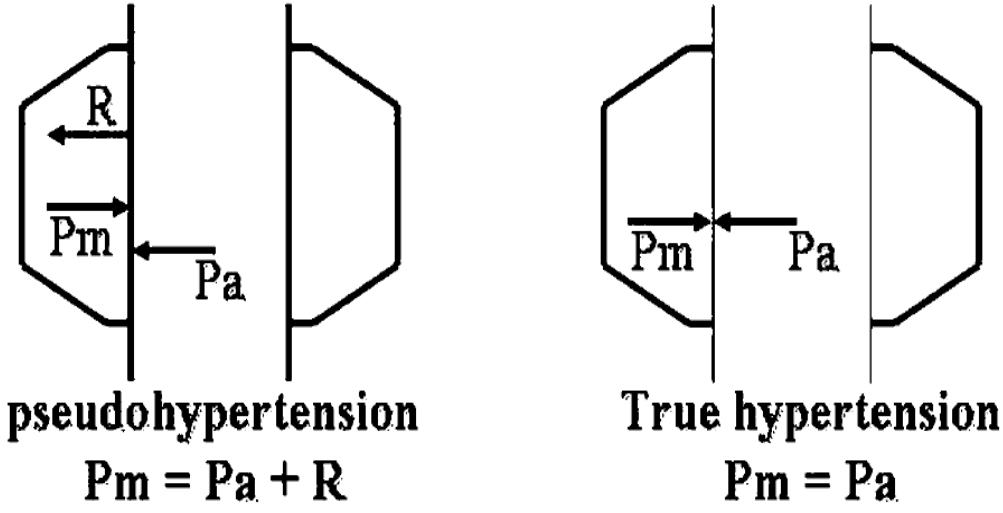


Figure 4. Mechanisms underlying pseudohypertension.

Table 6 Clinical conditions associated with increased arterial stiffness and/or wave reflections

Ageing	CV risk factors	CV diseases
Other physiological conditions	Obesity	Coronary heart disease
Low birth weight	Smoking	Congestive heart failure
Menopausal status	Hypertension	Fatal stroke
Lack of physical activity	Hypercholesterolaemia	Primarily non-CV diseases
Genetic background	Impaired glucose tolerance	ESRD
Parental history of hypertension	Metabolic syndrome	Moderate chronic kidney disease
Parental history of diabetes	Type 1 diabetes	Rheumatoid arthritis
Parental history of myocardial infarction	Type 2 diabetes	Systemic vasculitis
Genetic polymorphisms	Hyperhomocyteinaemia	Systemic lupus erythematosus
	High CRP level	

Pseudohypertension

- Facteurs de risque: âge / DB / IRC
- Dépistage:
  - Manœuvre d'Osler Vs Canulation artérielle vs TOA
  - HTA systolique isolée
  - TA différentielle > 60 (en absence d'IAo)
  - TAd < 60mmHg

Blood Pressure. 2005; 14 (Suppl 2): 42–45
Journal of Hypertension 2005, **23**:1441–1444
N Engl J Med 2006;355:385-92.
J Cardiovasc Pharmacol Ther 2006; 11; 113
American Journal of Therapeutics 10, 122–126 (2003)

Pseudohypertension

- Que faire en présence de pseudo-HTA?
  - TOA: déterminer par quel montant on surestime la TAs (normal < 10 mmHg)
    - Exemple: TA brachiale 180/60 avec une TA centrale estimée à 100/60; on doit donc déduire 80 mmHg de la TAs
  - Si pas de TAO disponible
    - Ne pas regarder la TAs, viser TAd > 60mmHg mais < 90mmHg

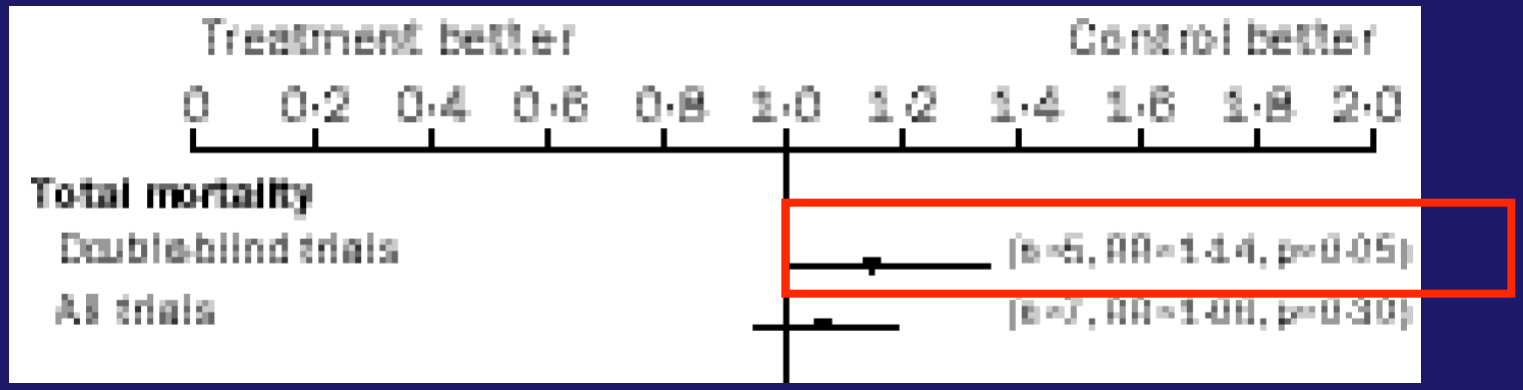
Quelles sont les cibles de TA chez les personnes âgées??

Tx anti HTA chez la personne âgée: augmentation de la mortalité??

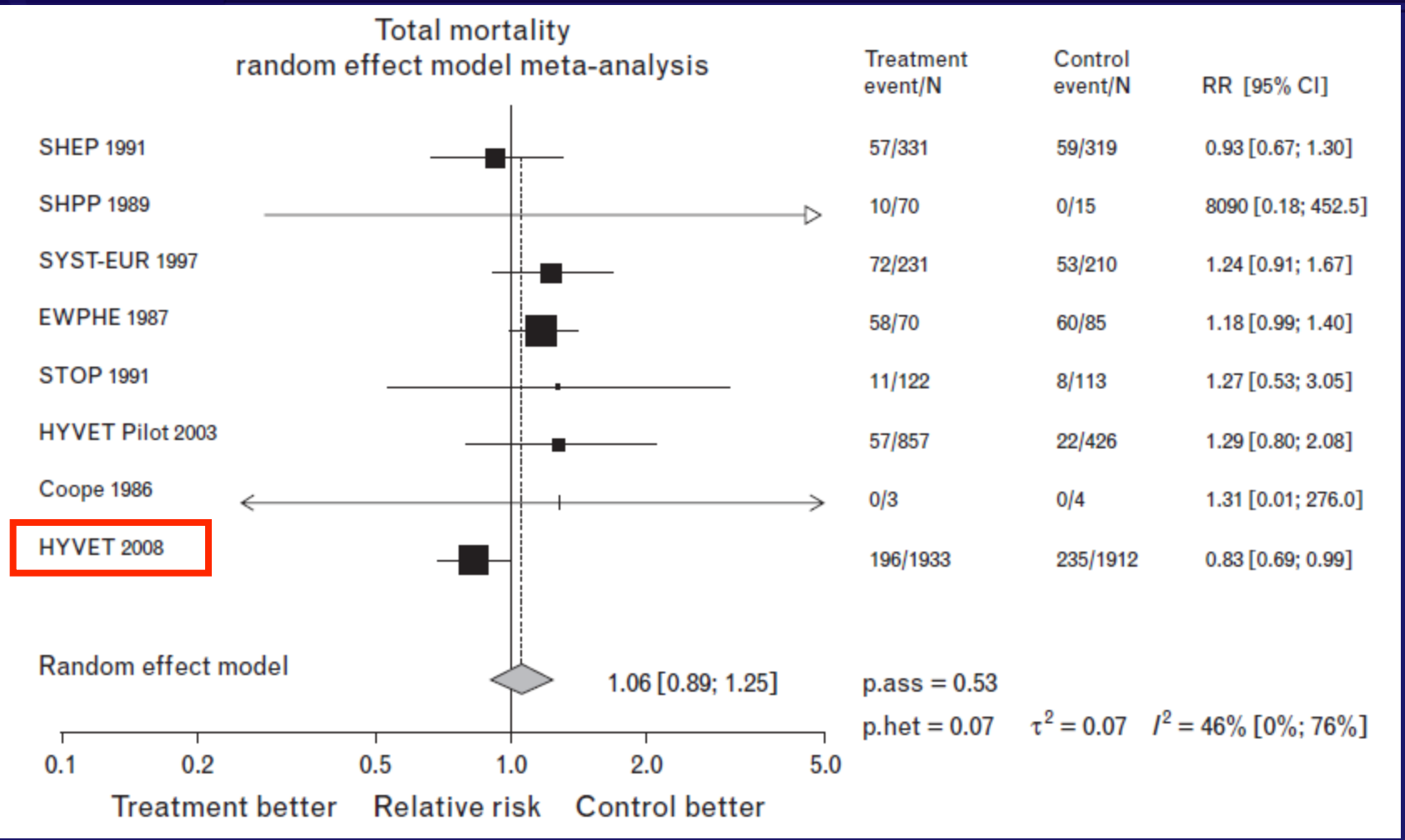
	Coope and Warrender		EWPHE		SHEP-P		SHEP		STOP		Syst-Eur		CASTEL		Total	
	Active	Control	Active	Control	Active	Control	Active	Control	Active	Control	Active	Control	Active	Control	Active	Control
Number of patients	3	4	70	85	70	15	331	319	122	113	231	210	47	50	874	796
Stroke	0	1	NA	NA	3	3	21	38	10	8	17	20	6	7	57*	77*
Stroke death	0	0	11	9	0	0	3	4	4	1	10	9	6	5	34	28
Heart failure	0	0	NA	NA	4	0	12	33	3	2	14	15	9	14	42*	64*
Coronary events	0	0	NA	NA	3	0	19	26	0	1	17	14	4	10	43*	51*
Coronary death	0	0	9	8	3	0	14	18	2	1	14	11	2	9	44	47
Cardiovascular events	0	1	NA	NA	9	3	45	65	12	16	42	40	25	33	133*	158*
Cardiovascular death	0	0	34	34	6	0	25	29	7	3	32	27	23	30	127	123
Total mortality	0	0	58	60	10	0	57	59	11	8	72	53	37	43	245	223

NA=data not available. *Excludes data from EWPHE.

Table 2: **Outcomes (number of patients) by treatment group**



Lancet 1999; **353:** 793–96



Journal of Hypertension 2010, 28:1366–1372

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 MAY 1, 2008 VOL. 358 NO. 18

Treatment of Hypertension in Patients 80 Years of Age or Older

Nigel S. Beckett, M.B., Ch.B., Ruth Peters, Ph.D., Astrid E. Fletcher, Ph.D., Jan A. Staessen, M.D., Ph.D., Lisheng Liu, M.D., Dan Dumitrascu, M.D., Vassil Stoyanovsky, M.D., Riitta L. Antikainen, M.D., Ph.D., Yuri Nikitin, M.D., Craig Anderson, M.D., Ph.D., Alli Belhani, M.D., Françoise Forette, M.D., Chakravarthi Rajkumar, M.D., Ph.D., Lutgarde Thijs, M.Sc., Winston Banya, M.Sc., and Christopher J. Bulpitt, M.D., for the HYVET Study Group*

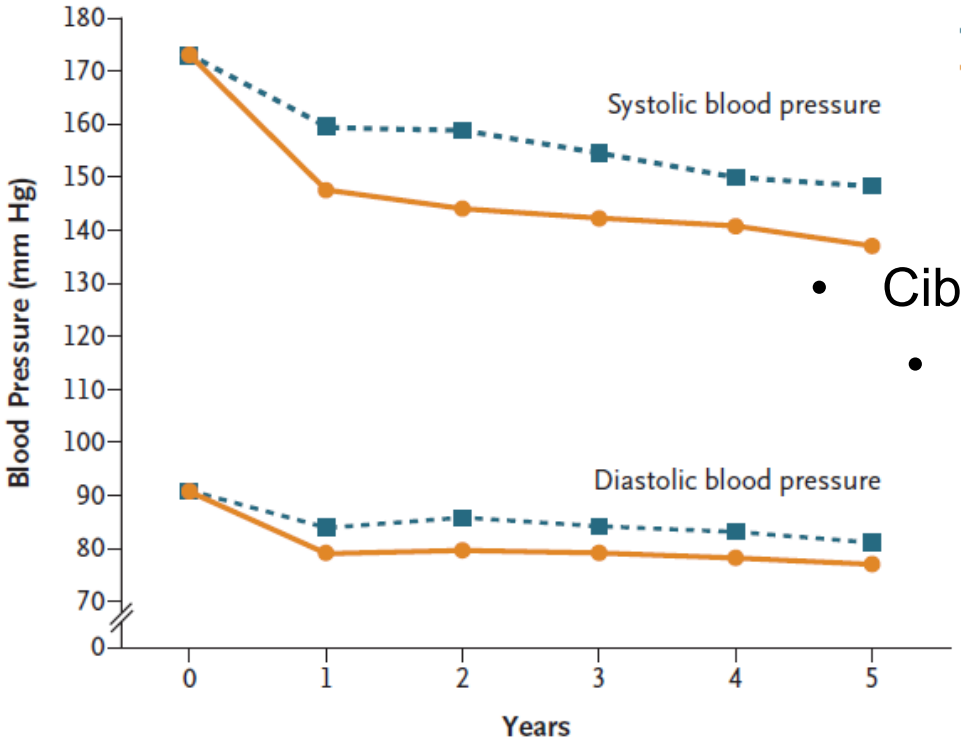
N Engl J Med 2008;358:1887-98.

HYVET méthode

- Inclusion:
  - > 80 ans
  - Absence d'hypotension orthostatique
  - TAs > 160 mmHg
- Traitement
  - Indapamide vs placebo
  - Cible: TAs < 150mmHg
  - Ajout de perindopril PRN si cible non atteinte

Table 1. **Baseline Characteristics of the Patients.***

Characteristic	Active Treatment (N = 1933)	Placebo (N = 1912)
Age — yr	83.6±3.2	83.5±3.1
Female sex — no. (%)	1174 (60.7)	1152 (60.3)
Blood pressure — mm Hg		
While sitting	173.0±8.4/90.8±8.5	173.0±8.6/90.8±8.5
While standing	168.0±11.0/88.7±9.3	167.9±11.1/88.6±9.3
Orthostatic hypotension — no. (%)†	152 (7.9)	169 (8.8)
Isolated systolic hypertension — no. (%)	625 (32.3)	623 (32.6)
Heart rate — beats/min	74.5±9.1	74.5±9.3
Cardiovascular history		
Cardiovascular disease — no. (%)	223 (11.5)	229 (12.0)
Hypertension — no. (%)	1737 (89.9)	1718 (89.9)
Antihypertensive treatment — no. (%)	1241 (64.2)	1245 (65.1)
Stroke — no. (%)	130 (6.7)	131 (6.9)
Myocardial infarction — no. (%)	59 (3.1)	62 (3.2)
Heart failure — no. (%)	56 (2.9)	55 (2.9)
Cardiovascular risk factors		
Current smoker — no. (%)	123 (6.4)	127 (6.6)
Diabetes — no. (%)‡	132 (6.8)	131 (6.9)
Total cholesterol — mmol/liter	5.3±1.1	5.3±1.1
High-density lipoprotein cholesterol — mmol/liter	1.35±0.38	1.35±0.37
Serum creatinine — μmol/liter	88.6±20.5	89.2±20.5
Uric acid — μmol/liter	280.4±79.3	279.0±81.3
Body-mass index§	24.7±3.8	24.7±3.5



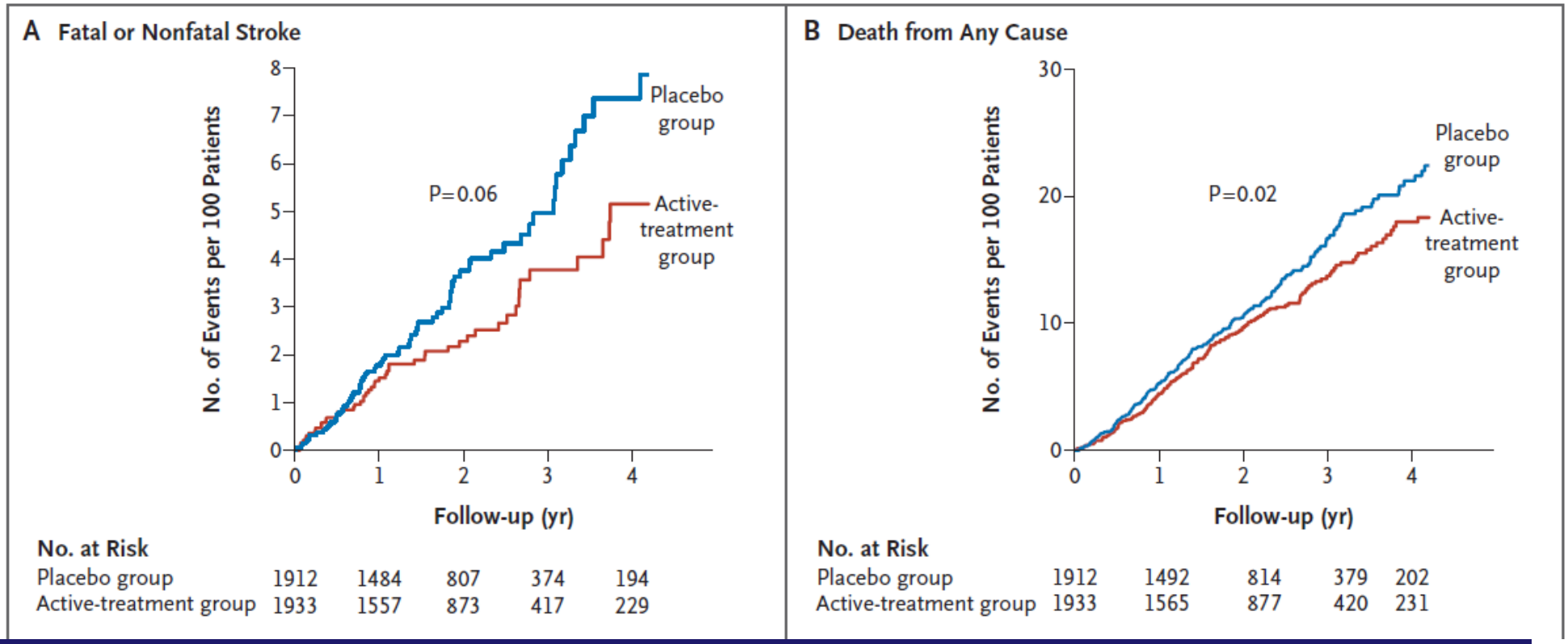
No. at Risk

Placebo group	1912	1468	701	330	191	116
Active-treatment group	1933	1540	754	373	207	118

Figure 2. Mean Blood Pressure, Measured while Patients Were Seated, in the Intention-to-Treat Population, According to Study Group.

- Cible < 150mmHg TAs
  - Cible atteinte:
    - 20% placebo
    - 48% tx actif

N Engl J Med 2008;358:1887-98.



- Conclusion: on peut traiter l'HTA chez les patients > 80 ans si:
  - •Le patient est en forme avec peu de comorbidité
  - •On a éliminé l'hypotension orthostatique (et la pseudo HTA)
  - •On vise une cible TAs <150mmHg

N Engl J Med 2008;358:1887-98.

Que faire chez le patient âgé qui « n'est pas en forme??? »

Rethinking the Association of High Blood Pressure With Mortality in Elderly Adults

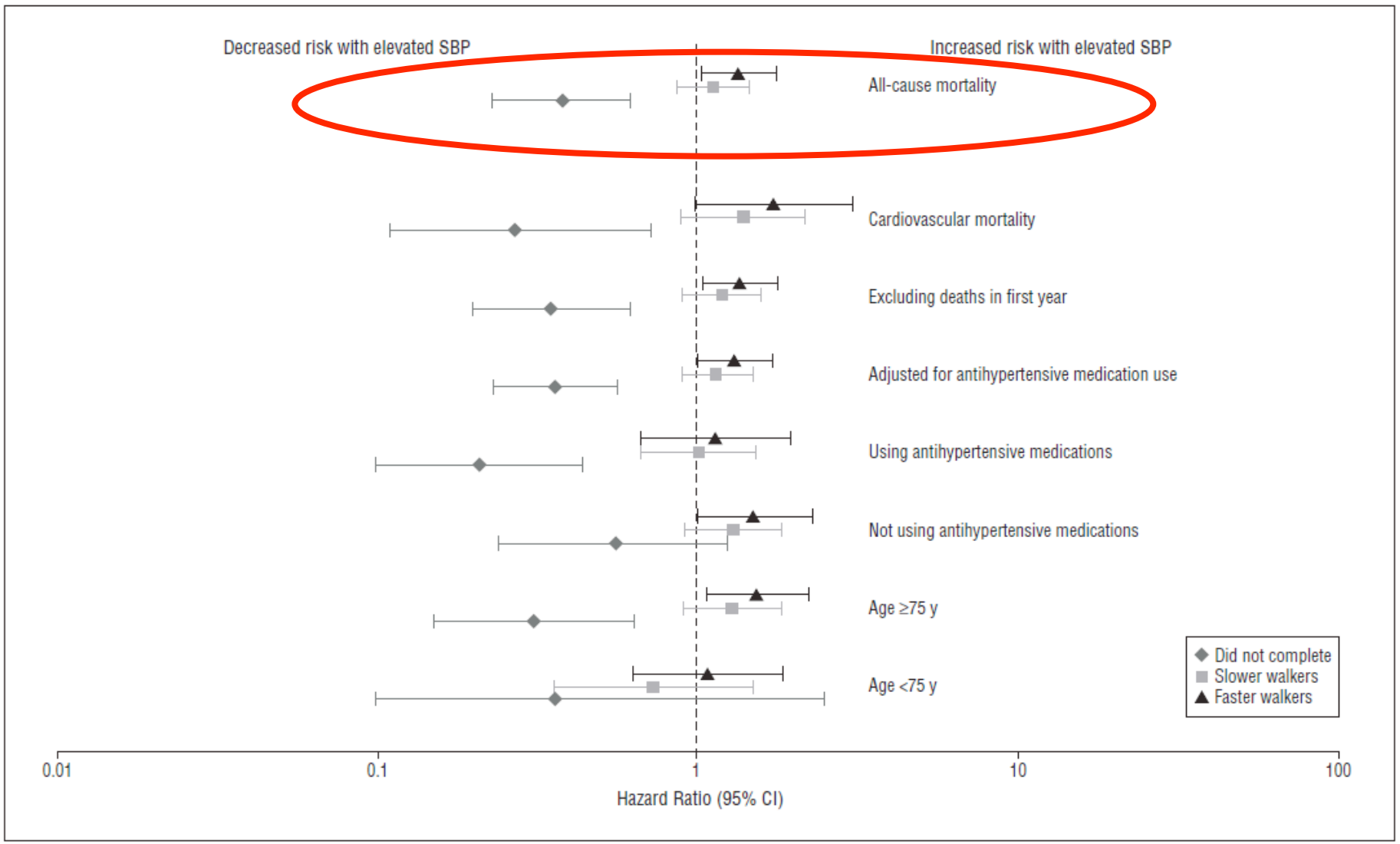
The Impact of Frailty

Michelle C. Odden, PhD; Carmen A. Peralta, MD, MAS; Mary N. Haan, DrPH; Kenneth E. Covinsky, MD, MPH

- Cohorte NHANES
- 65 ans et plus (2340 sujets)
- Test de marche de 6m
  - Rapide (normal) 0.8m/s (6m en 4.8s)
  - Lent
  - Incapable de compléter 6m

Arch Intern Med. 2012;172(15):1162-1168.

Relation événements avec HTA



Arch Intern Med. 2012;172(15):1162-1168.

Rethinking the Association of High Blood Pressure With Mortality in Elderly Adults

The Impact of Frailty

Michelle C. Odden, PhD; Carmen A. Peralta, MD, MAS; Mary N. Haan, DrPH; Kenneth E. Covinsky, MD, MPH

Conclusions: Walking speed could be a simple measure to identify elderly adults who are most at risk for adverse outcomes related to high BP.

- Passe bien le test de marche: HTA délétère (on doit les traiter)
- Incapable de faire le test de marche: HTA est un facteur protecteur (on ne doit pas les traiter)

INVITED COMMENTARY

Gait Speed

An Important Vital Sign in Old Age

Arch Intern Med. 2012;172(15):1162-1168.

Quel médicament anti-HTA utilisé chez la personne âgée??

Indapamide de HYVET??

Effects of different regimens to lower blood pressure on major cardiovascular events in older and younger adults: meta-analysis of randomised trials

Blood Pressure Lowering Treatment Trialists' Collaboration

WHAT IS ALREADY KNOWN ON THIS TOPIC

In observational studies the proportional reductions in the risks of vascular disease associated with lower blood pressure levels decline with increasing age, suggesting that the relative effects of blood pressure lowering drugs might be smaller among elderly people

Some blood pressure management guidelines recommend specific classes of blood pressure lowering treatment for particular age groups

WHAT THIS STUDY ADDS

Blood pressure reduction produces similar proportional reductions in the risks of vascular events in younger (‹65 years) and older (≥65 years) adults

The absolute benefits of treatment are likely to be particularly large among older individuals because of their higher average risk

There was no clear evidence to support recommendations for particular drug classes in older or younger adults

BMJ online avril 2008

Conclusions

- On peut traiter l'HTA chez la personne très âgée
  - S'il n'y a pas d'HTO
  - S'il n'y a pas de pseudo HTA (viser TAd > 60mmHg?)
  - Si le patient est en forme, sans comorbidité
  - Si le test de marche est normal
- Viser TAs < 150 mmHg
- Préférence indapamide? (HYVET)

- Ne pas traiter si
  - Incapable de faire un test de marche
  - Trop malade? Comorbidités? TA entre 140-160?

Canadian Journal of Cardiology 29 (2013) 528–542

Guidelines

The 2013 Canadian Hypertension Education Program Recommendations for Blood Pressure Measurement, Diagnosis, Assessment of Risk, Prevention, and Treatment of Hypertension

Daniel G. Hackam, MD, PhD,[a] Robert R. Quinn, MD, PhD,[b] Pietro Ravani, MD, PhD,[b] Doreen M. Rabi, MD, MSc,[c] Kaberi Dasgupta, MD, MSc,[d] Stella S. Daskalopoulou, MD, PhD,[d] Nadia A. Khan, MD, MSc,[e] Robert J. Herman, MD,[f] Simon L. Bacon, PhD,[g] Lyne Cloutier, RN, PhD,[h] Martin Dawes, MBBS, MD(Lond),[i] Simon W. Rabkin, MD,[j] Richard E. Gilbert, MD, PhD,[k] Marcel Ruzicka, MD, PhD,[l] Donald W. McKay, PhD,[m] Tavis S. Campbell, PhD,[n] Steven Grover, MD, MPA,[o] George Honos, MD,[p] Ernesto L. Schiffrin, MD, PhD,[q] Peter Bolli, MD,[r] Thomas W. Wilson, MD,[s] Ross D. Feldman, MD,[t] Patrice Lindsay, RN, BScN, MEd, PhD,[u] Michael D. Hill, MD, MSc,[v] Mark Gelfer, MD,[w] Kevin D. Burns, MD,[i] Michel Vallée, MD, PhD,[x]

Nouvelle recommandation 2013

Deuxièmement, et de manière distincte, chez les patients très âgés ayant une hypertension systolique isolée (80 ans et plus), la valeur cible de PA systolique recommandée devrait être < 150 mm Hg (cote C) plutôt que < 140 mm Hg comme chez les patients plus jeunes.

B. Recommendations for individuals with isolated systolic hypertension

1. In the very elderly (age 80 years and older), the target for SBP should be < 150 mm Hg (Grade C) (**new recommendation**).

Canadian Journal of Cardiology 29 (2013) 528–542

Background. This year, the Task Force reappraised the SBP treatment target in the very elderly (age $\geq$ 80 years), in whom the isolated systolic form of hypertension predominates. This reappraisal included review of a 1670-patient meta-analysis of placebo-controlled randomized trials that reported reductions in stroke, major cardiovascular events, and heart failure with antihypertensive drug treatment.[30] However, a trend toward increased overall and cardiovascular mortality was also noted in this meta-analysis. Subsequent to the meta-analysis, the **Hy**pertension in the **V**ery **E**lderly **T**rial (HYVET) was performed.

Canadian Journal of Cardiology 29 (2013) 528–542

Finally, the trial enrolled a relatively healthy sample of very elderly patients; thus, caution and close follow-up are warranted when generalizing to frailer patients.

European Heart Journal (2013) **34**, 2159–2219
doi:10.1093/eurheartj/eht151

ESH AND ESC GUIDELINES

2013 ESH/ESC Guidelines for the management of arterial hypertension

The Task Force for the management of arterial hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC)

Table 5 Office blood pressure measurement

When measuring BP in the office, care should be taken:
• To allow the patients to sit for 3–5 minutes before beginning BP measurements.
• To take at least two BP measurements, in the sitting position, spaced 1–2 min apart, and additional measurements if the first two are quite different. Consider the average BP if deemed appropriate.
• To take repeated measurements of BP to improve accuracy in patients with arrhythmias, such as atrial fibrillation.
• To use a standard bladder (12–13 cm wide and 35 cm long), but have a larger and a smaller bladder available for large (arm circumference >32 cm) and thin arms, respectively.
• To have the cuff at the heart level, whatever the position of the patient.
• When adopting the auscultatory method, use phase I and V (disappearance) Korotkoff sounds to identify systolic and diastolic BP, respectively.
• To measure BP in both arms at first visit to detect possible differences. In this instance, take the arm with the higher value as the reference.
• To measure at the first visit, BP 1 and 3 min after assumption of the standing position in elderly subjects, diabetic patients, and in other conditions in which orthostatic hypotension may be frequent or suspected.
• To measure, in case of conventional BP measurement, heart rate by pulse palpation (at least 30 s) after the second measurement in the sitting position.

BP = blood pressure.

Dépistage de l'HTO chez les personnes âgées

it could be due to BP variability. In elderly subjects, diabetic patients and in other conditions in which orthostatic hypotension may be frequent or suspected, it is recommended that BP be measured 1 min and 3 min after assumption of the standing position. Orthostatic hypotension—defined as a reduction in SBP of $\geq$20 mmHg or in DBP of $\geq$10 mmHg within 3 min of standing—has been shown to carry a worse prognosis for mortality and CV events.[58,59] If feasible,

European Heart Journal (2013) **34**, 2159–2219

4.2.5 Grade 1 hypertension in the elderly

Although the 2007 ESH/ESC and other guidelines recommended treating grade 1 hypertensives independently of age,[2,273] it has been recognized that all the trials showing the benefits of antihypertensive treatment in the elderly have been conducted in patients with SBP $\geq$160 mmHg (grades 2 and 3).[141,265]

Initiation of antihypertensive drug treatment

Recommendations	Class [a]	Level [b]	Ref. [c]
Prompt initiation of drug treatment is recommended in individuals with grade 2 and 3 hypertension with any level of CV risk, a few weeks after or simultaneously with initiation of lifestyle changes.	I	A	260, 265, 284
Lowering BP with drugs is also recommended when total CV risk is high because of OD, diabetes, CVD or CKD, even when hypertension is in the grade 1 range.	I	B	260, 284
Initiation of antihypertensive drug treatment should also be considered in grade 1 hypertensive patients at low to moderate risk, when BP is within this range at several repeated visits or elevated by ambulatory BP criteria, and remains within this range despite a reasonable period of time with lifestyle measures.	IIa	B	266, 267
In elderly hypertensive patients drug treatment is recommended when SBP is ≥160 mmHg.	I	A	141, 265
Antihypertensive drug treatment may also be considered in the elderly (at least when younger than 80 years) when SBP is in the 140–159 mmHg range, provided that antihypertensive treatment is well tolerated.	IIb	C	-
Unless the necessary evidence is obtained it is not recommended to initiate antihypertensive drug therapy at high normal BP.	III	A	265
Lack of evidence does also not allow recommending to initiate antihypertensive drug therapy in young individuals with isolated elevation of brachial SBP, but these individuals should be followed closely with lifestyle recommendations.	III	A	142

BP = blood pressure; CKD = chronic kidney disease; CV = cardiovascular; CVD = cardiovascular disease; OD = organ damage; SBP = systolic blood pressure.
[a]Class of recommendation.
[b]Level of evidence.
[c]Reference(s) supporting recommendation(s).

European Heart Journal (2013) **34**, 2159–2219

4.3.3 Hypertension in the elderly

In the large number of randomized trials of antihypertensive treatment in the elderly (including one in hypertensive patients aged 80 years or more)[287] all showing reduction in CV events through lowering of BP, the average achieved SBP never attained values <140 mmHg.[265] Con-

Blood pressure goals in hypertensive patients

Recommendations	Class [a]	Level [b]	Ref. [c]
A SBP goal <140 mmHg:			
a) is recommended in patients at low–moderate CV risk;	I	B	266, 269, 270
b) is recommended in patients with diabetes;	I	A	270, 275, 276
c) should be considered in patients with previous stroke or TIA;	IIa	B	296, 297
d) should be considered in patients with CHD;	IIa	B	141, 265
e) should be considered in patients with diabetic or non-diabetic CKD.	IIa	B	312, 313
In elderly hypertensives less than 80 years old with SBP ≥160 mmHg there is solid evidence to recommend reducing SBP to between 150 and 140 mmHg.	I	A	265
In fit elderly patients less than 80 years old SBP values <140 mmHg may be considered, whereas in the fragile elderly population SBP goals should be adapted to individual tolerability.	IIb	C	-
In individuals older than 80 years and with initial SBP ≥160 mmHg, it is recommended to reduce SBP to between 150 and 140 mmHg provided they are in good physical and mental conditions.	I	B	287
A DBP target of <90 mmHg is always recommended, except in patients with diabetes, in whom values <85 mmHg are recommended. It should nevertheless be considered that DBP values between 80 and 85 mmHg are safe and well tolerated.	I	A	269, 290, 293

CHD = coronary heart disease; CKD = chronic kidney disease; CV = cardiovascular; DBP = diastolic blood pressure; SBP = systolic blood pressure; TIA = transient ischaemic attack.

[a]Class of recommendation.

[b]Level of evidence.

[c]Reference(s) supporting recommendation(s).

Table 15 Drugs to be preferred in specific conditions

Condition	Drug
Asymptomatic organ damage	
LVH	ACE inhibitor, calcium antagonist, ARB
Asymptomatic atherosclerosis	Calcium antagonist, ACE inhibitor
Microalbuminuria	ACE inhibitor, ARB
Renal dysfunction	ACE inhibitor, ARB
Clinical CV event	
Previous stroke	Any agent effectively lowering BP
Previous myocardial infarction	BB, ACE inhibitor, ARB
Angina pectoris	BB, calcium antagonist
Heart failure	Diuretic, BB, ACE inhibitor, ARB, mineralocorticoid receptor antagonists
Aortic aneurysm	BB
Atrial fibrillation, prevention	Consider ARB, ACE inhibitor, BB or mineralocorticoid receptor antagonist
Atrial fibrillation, ventricular rate control	BB, non-dihydropyridine calcium antagonist
ESRD/proteinuria	ACE inhibitor, ARB
Peripheral artery disease	ACE inhibitor, calcium antagonist
Other	
ISH (elderly)	Diuretic, calcium antagonist
Metabolic syndrome	ACE inhibitor, ARB, calcium antagonist
Diabetes mellitus	ACE inhibitor, ARB
Pregnancy	Methyldopa, BB, calcium antagonist
Blacks	Diuretic, calcium antagonist

indapamide

Non selon

Effects of different regimens to lower blood pressure on major cardiovascular events in older and younger adults: meta-analysis of randomised trials

Blood Pressure Lowering Treatment Trialists' Collaboration

2008

European Heart Journal (2013) **34**, 2159–2219

6.3.1 Summary of recommendations on antihypertensi treatment strategies in the elderly

Antihypertensive treatment strategies in the elderly

Recommendations	Class [a]	Level [b]	Ref. [c]
In elderly hypertensives with SBP ≥160 mmHg there is solid evidence to recommend reducing SBP to between 150 and 140 mmHg.	I	A	141, 265
In fit elderly patients <80 years old antihypertensive treatment may be considered at SBP values ≥140 mmHg with a target SBP <140 mmHg if treatment is well tolerated.	IIb	C	-
In individuals older than 80 years with an initial SBP ≥160 mmHg it is recommended to reduce SBP to between 150 and 140 mmHg, provided they are in good physical and mental conditions.	I	B	287
In frail elderly patients, it is recommended to leave decisions on antihypertensive therapy to the treating physician, and based on monitoring of the clinical effects of treatment.	I	C	-
Continuation of well-tolerated antihypertensive treatment should be considered when a treated individual becomes octogenarian.	IIa	C	-
All hypertensive agents are recommended and can be used in the elderly, although diuretics and calcium antagonists may be preferred in isolated systolic hypertension.	I	A	444, 449, 451, 452

European Heart Journal (2013) **34**, 2159–2219

compression of the vessel and (iii) pseudo-hypertension, i.e. marked arterial stiffening (more common in the elderly, especially with heavily calcified arteries), which prevents occlusion of the brachial artery.

European Heart Journal (2013) **34**, 2159–2219

11 Gaps in evidence and need for future trials

Based on the review of the evidence available for the 2013 Guidelines on hypertension, it is apparent that several therapeutic issues are still open to question and would benefit from further investigation:

(1) Should antihypertensive drug treatment be given to all patients with grade 1 hypertension when their CV risk is low-to-moderate?
(2) Should elderly patients with a SBP between 140 and 160 mmHg be given antihypertensive drug treatments?

European Heart Journal (2013) **34**, 2159–2219

Conclusions

- On peut traiter l'HTA chez la personne très âgée
  - S'il n'y a pas d'HTO
  - S'il n'y a pas de pseudo HTA (viser TAd > 60mmHg?)
  - Si le patient est en forme, sans comorbidité
  - Si le test de marche est normal
- Viser TAs < 150 mmHg
- Préférence indapamide? (HYVET)

- Ne pas traiter si
  - Incapable de faire un test de marche
  - Trop malade? Comorbidités? TA entre 140-160?

Merci de votre Attention!!!

Questions??