

Prise en charge de l'hypertension artérielle :
Nouvelles recommandations et objectif à
atteindre chez le diabétique

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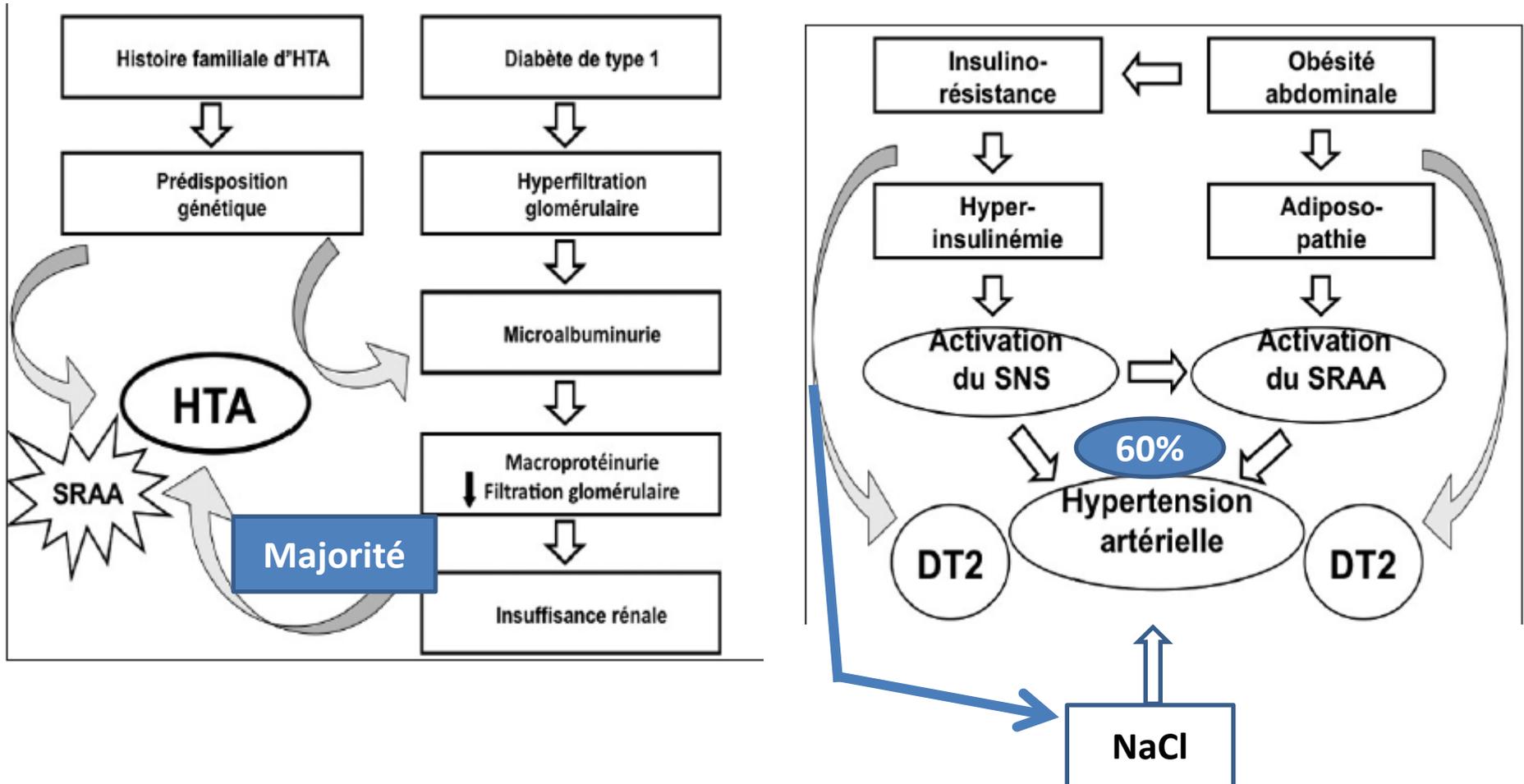
Cas clinique

Monsieur HD , 40 ans, hypertendu NON traité (PA de 160/100 mmHg depuis 2 à 3 ans!), vient de se voir découvrir un diabète.

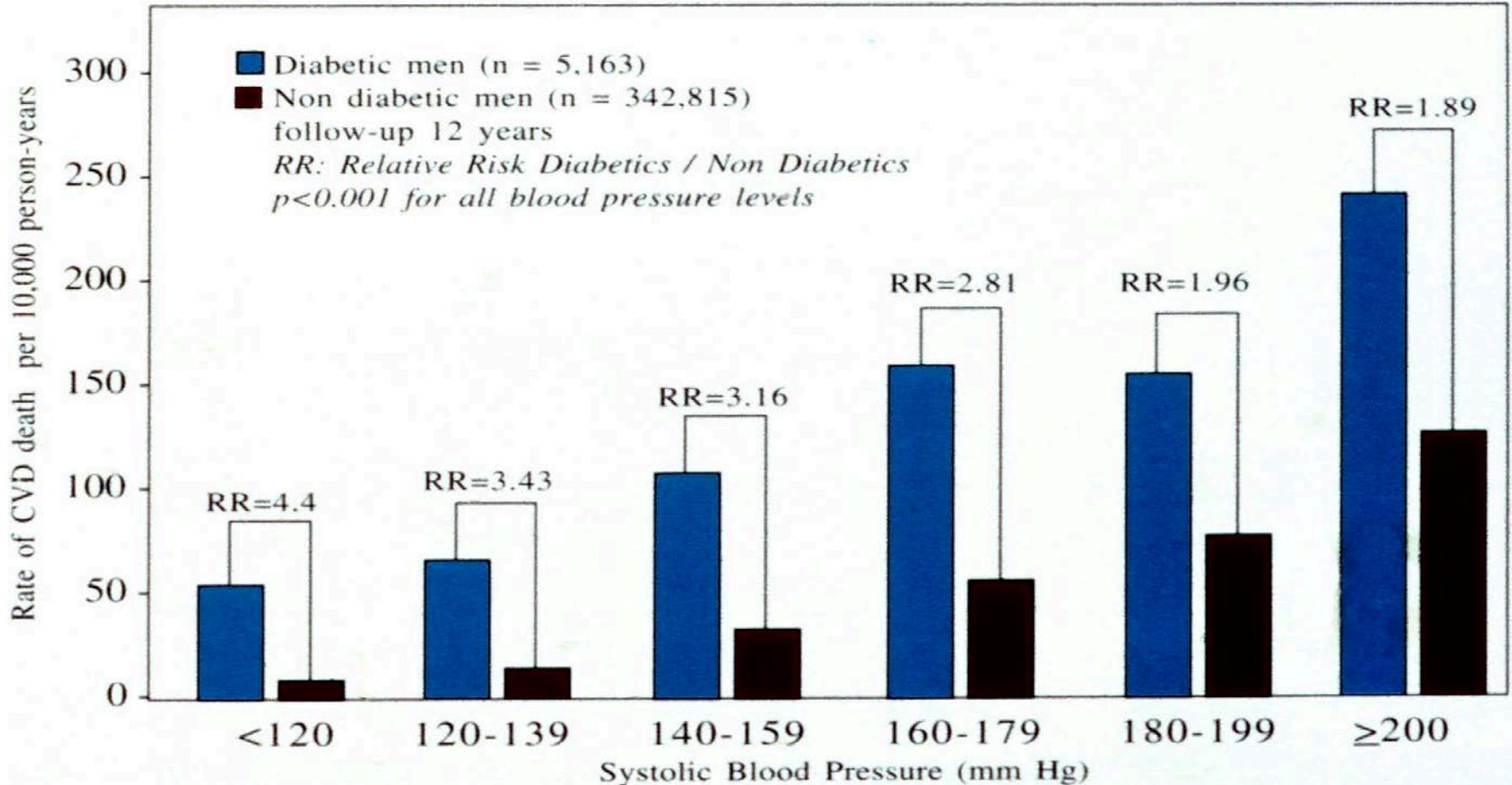
- Il consulte pour une prise en charge car sa maman, 65 ans, vient de décéder suite à un AVC. Elle souffrait aussi d'HTA et de diabète.
- L'examen du patient montre une obésité avec un périmètre abdominal de 105 cm.
- Il est employé, sédentaire, fumant le weekend.
- Que lui proposer?

HYPERTENSION ET DIABÈTE : à propos d'une association commune mais complexe

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Diabetes, other risk factors, and 12-y cardiovascular mortality for men screened in the MRFIT trial



Stamler et al., *Diabetes Care*, 1993.

2013 ESH/ESC Guidelines for the management of arterial hypertension

Journal of Hypertension 2013, 31:1281–1357

| 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 | | Low risk | Moderate risk | High risk |
| 1–2 RF | Low risk | Moderate risk | Moderate to high risk | High risk |
| ≥3 RF | Low to moderate risk | Moderate to high risk | High risk | High risk |
| OD, CKD stage 3 or diabetes | Moderate to high risk | High risk | High risk | High to very high risk |
| Symptomatic CVD, CKD stage ≥ 4 or diabetes with OD/RFs | Very high risk | Very high risk | Very high risk | Very high risk |

Prise en charge de notre patient

- HTA confirmée par automesure (150/96)
- Pas d'HVG
- FO: v de type 2, pas de rétinopathie diabétique
- Echo doppler des artères rénales: normal
- RU: négatives mais μ albuminurie+ (2X)
- Fonction rénale: N
- Hb A1C: 8%
- LDL Chol: 125 mg/dl

Valeurs cibles de la PAS chez les patients diabétiques

- Lignes directrices ESC/ESH 2007

< 140/90 mmHg pour tous les patients hypertendus

< 130/80 mmHg pour les diabétiques (vu risque CV>)

- Lignes directrices ESH 2009

< 140/90 mm Hg pour tous les patients hypertendus

< 130/80 mm Hg possible mais prudence quand AP coronarien

| 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 |

BP = blood pressure; CKD = chronic kidney disease; CV = cardiovascular; CVD = cardiovascular disease; DBP = diastolic blood pressure; HT = hypertension; OD = organ damage; RF = risk factor; SBP = systolic blood pressure.

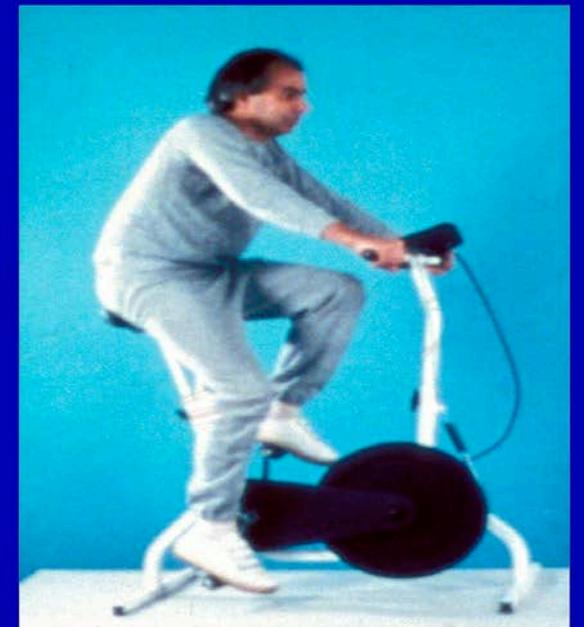
NON-DRUG THERAPY

Weight reduction

Salt restriction

Abstinence from smoking

Exercise



Cardiovascular Effects of Intensive Lifestyle Intervention in Type 2 Diabetes

The Look AHEAD Research Group*

N Engl J Med 2013;369:145-54.

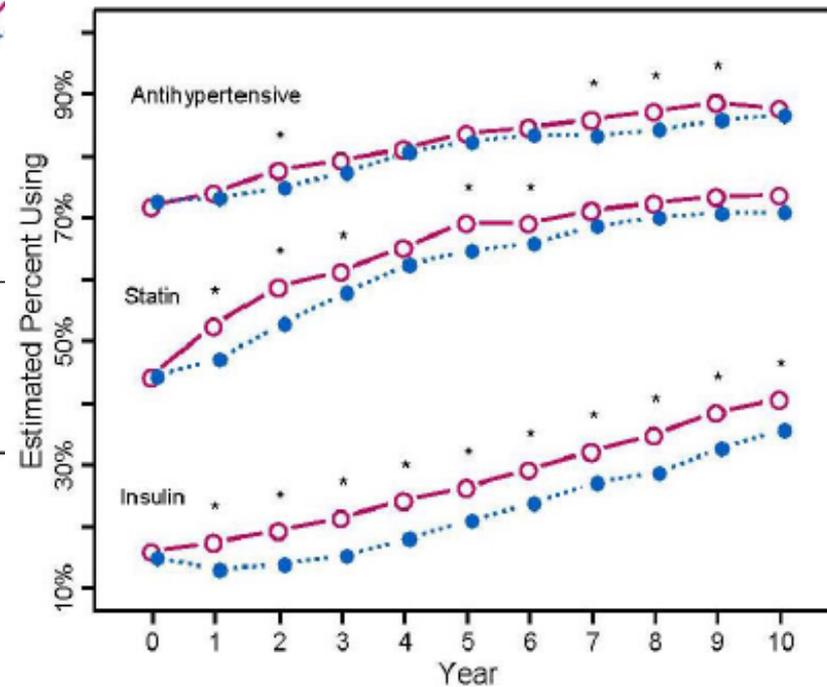
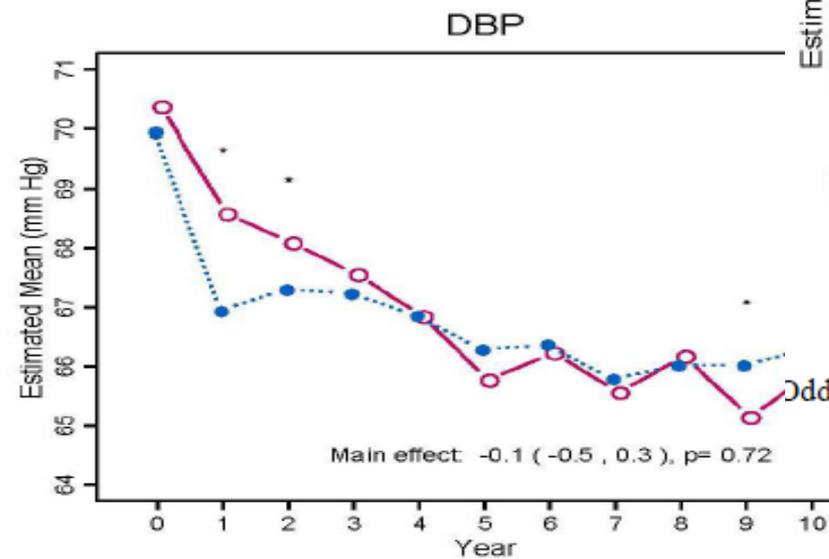
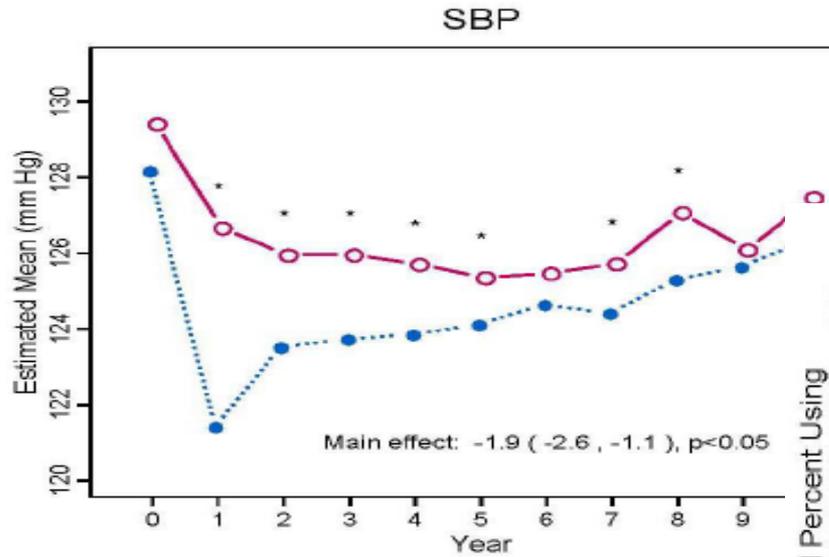
In 16 study centers in the United States, we randomly assigned 5145 overweight or obese patients with type 2 diabetes to participate in an intensive lifestyle intervention that promoted weight loss through decreased caloric intake and increased physical activity (intervention group) or to receive diabetes support and education (control group). The primary outcome was a composite of death from cardiovascular causes, nonfatal myocardial infarction, nonfatal stroke, or hospitalization for angina during a maximum follow-up of 13.5 years.

The trial was stopped early on the basis of a futility analysis when the median follow-up was 9.6 years. Weight loss was greater in the intervention group than in the control group throughout the study (8.6% vs. 0.7% at 1 year; 6.0% vs. 3.5% at study end). The intensive lifestyle intervention also produced greater reductions in glycated hemoglobin and greater initial improvements in fitness and all cardiovascular risk factors, except for low-density-lipoprotein cholesterol levels. The primary outcome occurred in 403 patients in the intervention group and in 418 in the control group (1.83 and 1.92 events per 100 person-years, respectively; hazard ratio in the intervention group, 0.95; 95% confidence interval, 0.83 to 1.09; P=0.51).

Cardiovascular Effects of Intensive Lifestyle Intervention in Type 2 Diabetes

N Engl J Med 2013;369:145-54.

The Look AHEAD Research Group*



Odds ratios for medication use are: antihypertensive 0.88, 95% CI 0.78 to 0.89, $p = 0.026$;

Blood pressure goals in hypertensive patients

**DM + HTN: cible PA
<140/85 mmHg**

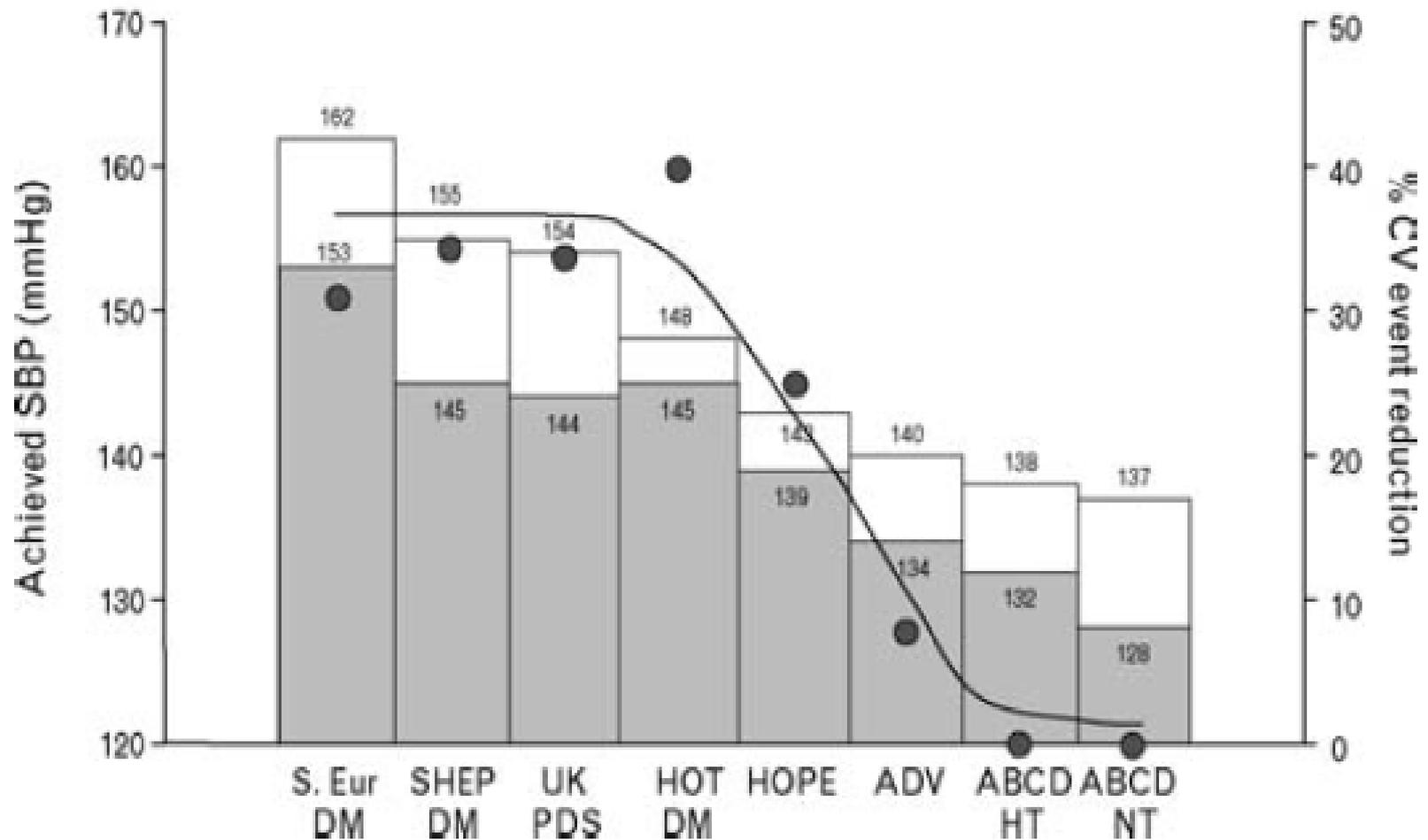
| Recommendations | Class ^a | Level ^b |
|--|--------------------|--------------------|
| A SBP goal <140 mmHg: | | |
| a) Is recommended in patients at low–moderate CV risk; | I | B |
| b) Is recommended in patients with diabetes; | I | A |
| c) should be considered in patients with previous stroke or TIA; | IIa | B |
| d) should be considered in patients with CHD; | IIa | B |
| e) should be considered in patients with diabetic or non-diabetic CKD. | IIa | B |
| 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 |
| 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 |
| 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 |

When should antihypertensive drug treatment be initiated and to what levels should systolic blood pressure be lowered? A critical reappraisal

Journal of Hypertension 2009, 27:923–934

Alberto Zanchetti^{a,b}, Guido Grassi^{a,c} and Giuseppe Mancia^{a,c}

Trials on antihypertensive treatment in diabetes



ACCORD BP Study: Primary and Secondary Outcomes

- Patients with T2D (GFR N, no μ Alb) and hypertension (N = 4733)
- Random assignment
 - Intensive therapy: target SBP < 120 mm Hg
 - Standard therapy: target SBP < 140 mm Hg
- 1° outcome: nonfatal MI, nonfatal stroke, death from CV causes
- Mean follow-up = 4.7 y

| Outcome | Intensive | Standard | HR | P-value |
|------------------------------------|-----------|----------|------|---------|
| SBP after 1 year (mmHg) | 119.3 | 133.5 | NR | NR |
| 1° outcome (annual rate) | 1.87 | 2.09 | 0.88 | .20 |
| Death from any cause (annual rate) | 1.28 | 1.19 | 1.07 | .55 |
| Stroke (annual rate) | 0.32 | 0.53 | 0.59 | .01 |
| AEs (rate) | 3.3 | 1.3 | NR | <.001 |

Prise en charge de notre patient

- Stimulation des règles H-D: activité physique au moins 5X/sem 30 min, low salt, diminution des lipides alimentaires et des calories
- Introduction d'un IEC
- Cible tensionnelle <140/85 mmHg
- Metformine à dose progressive
- Suivi capital des FR

Treatment strategies in patients with diabetes

Journal of Hypertension 2013, 31:1281–1357

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.

It is recommended that individual drug choice takes comorbidities into account.

Simultaneous administration of two blockers of the RAS is not recommended and should be avoided in patients with diabetes.

I

A

I

C

III

B

Cardiorenal End Points in a Trial of Aliskiren for Type 2 Diabetes

This article was published on November 3, 2012, at NEJM.org.

CONCLUSIONS

The addition of aliskiren to standard therapy with renin–angiotensin system blockade in patients with type 2 diabetes who are at high risk for cardiovascular and renal events is not supported by these data and may even be harmful. (Funded by Novartis; ALTITUDE ClinicalTrials.gov number, NCT00549757.)

Combined Angiotensin Inhibition for the Treatment of Diabetic Nephropathy

CONCLUSIONS

Combination therapy with an ACE inhibitor and an ARB was associated with an increased risk of adverse events among patients with diabetic nephropathy. (Funded by the Cooperative Studies Program of the Department of Veterans Affairs Office of Research and Development; VA NEPHRON-D ClinicalTrials.gov number, NCT00555217.)

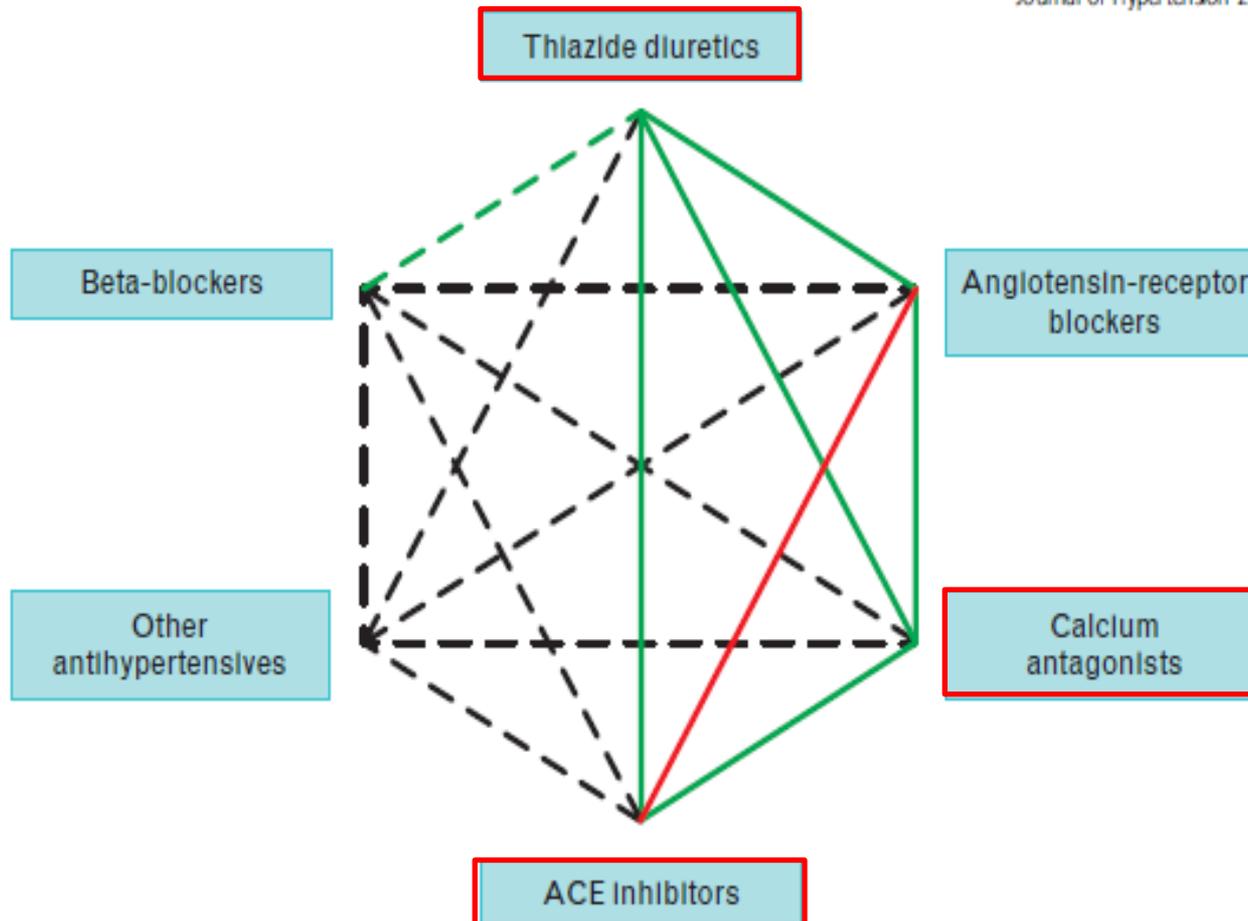
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Associations idéales si cible non atteinte

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ACE = angiotensin-converting enzyme.

Prise en charge de l'HTA chez le diabétique de type 2

- Arrêt du tabac
- Exercice physique quotidien
- Réduction du NaCl alimentaire (6g/j)
- BMI <25 Kg/m²
- HbA1c <7% (moins strict avec l'âge et les comorbidités)
- **PA < 140/85 mmHg** (peut-être plus bas si pas coronarien)
- Associations antiHTA souvent utiles (ISRA et AC ou D)
- LDL-chole <1g/l (même plus bas stt D2 à haut risque CV)
- μ Alb <30 mg/24h (ISRA + Low Salt)

The lower the better for HTA?
sometimes

The earlier the better !
for the majority