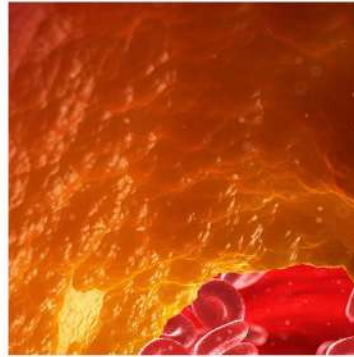
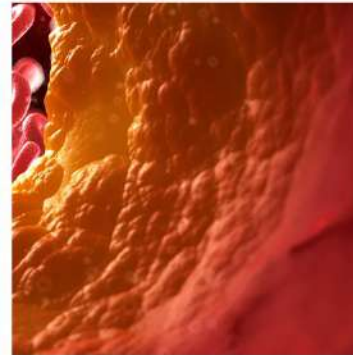
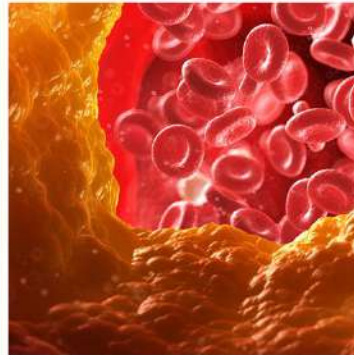


The 2019 EMEA Cardiometabolic Workshop



Saturday,
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Baku, Azerbaijan



Hypertensive patient with high heart rate

H.A.J. Struijker-Boudier

Learning objectives

- * Describe the clinical case of a complicated patient
- * Discuss the clinical approach and differential diagnoses for this patient
- * Illustrate the possible options for pharmacological treatment

Patient case

- * Patient is a 48 years old male teacher who comes for a health check up
- * He has no significant past medical history and is taking no medication
- * He smokes 15 cigarettes each day and drinks two bottles of beer on weekends

Physical examination

- * BMI 28
- * BP 165/94
- * HR 96 b/min
- * No cardiac abnormalities

Laboratory investigations

- * Fasting blood glucose: 6,0 mmol/l
- * HbA1C: 6,0
- * Normal free T4, TSH, T3
- * LDL cholesterol 3,2 mmol/l
- * HDL cholesterol 1,1 mmol/l

What advice would you give the patient?

1. Lifestyle changes
2. Add BP drugs targeting
<140/90 and - if tolerated - <130/80
3. Detection of poor adherence

Lifestyle Modifications

Modification	Approximate SBP Reduction (range)
Weight Reduction	5-10 mmHg/10kg
Adopt DASH eating plan	8-14 mmHg
Dietary sodium reduction	2-8 mmHg
Physical activity	4-9 mmHg
Moderation of alcohol consumption	2-4 mmHg

Which antihypertensive medications would you prescribe?

- 1 Thiazide diuretic
- 2 Beta – blocker
- 3 Calcium channel blocker
- 4 ACE – inhibitor
- 5 Angiotensin receptor blocker

2018 ESH/ESC guidelines for the management of arterial hypertension

- * All major classes of antihypertensives are suitable for the initiation and maintenance of antihypertensive treatment, either as monotherapy or in some combination
- * The specific choice of an antihypertensive (combination) depends on co-morbidities, patient phenotypes and side-effect profiles of individual drugs
- * The majority of hypertensive patients require a combination of two or more antihypertensives to reach target blood pressure (140/90mm Hg)

Should a beta-blocker be prescribed to reduce heart rate as well as blood pressure?

1 Yes

2 No

3 Maybe

Drugs to be preferred in subjects with Clinical CV events

2018 ESH/ESC Guidelines

- 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, MRA
- Atrial fibrillation, prevention: ARB, ACE inhibitor, **BB** or MRA
- Atrial fibrillation, ventricular rate control: **BB**, non-dihydrop CA
- ESRD/proteinuria: ACE inhibitor, ARB
- Peripheral artery disease: ACE inhibitor, CA

BB, beta-blockers

CA, calcium antagonists

MRA, mineralcort recept antagonists

Heart rate and BP: what is the current evidence?

- * Increased heart rate is an important risk factor for CV morbidity and mortality independent of BP level; e.g. Framingham, Syst-EUR, LIFE, VALUE, INVEST
- * Pharmacological reduction of HR reduces risk for CV morbidity and mortality, partly independent of the degree of BP reduction e.g. LIFE, VALUE, INVEST

During follow –up patient managed to quit smoking, did not reduce BMI or cholesterol levels. Upon examination:

BP 145/85 mmHg

HR 74 bpm

What would your next step be?

Why combination therapy

- * 75% of hypertensive patients require a combination of two or more antihypertensives to reach therapeutic targets
- * Combinations of antihypertensives with synergistic modes of action reduce blood pressure more effectively
- * Combination therapy reduces:
 - * the need for relatively high doses of individual antihypertensives
 - * the incidence of unfavorable side-effects
- * Single pill combination therapy contributes to better patient adherence/compliance