

Foundations of Cardiometabolic Health Certification Course

Certified Cardiometabolic Health Professional (CCHP)



Patient Cases

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Case 1

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Case 1 : William: 56-Year-Old African American Male

- 12-year history of T2DM, dyslipidemia, and history of uncomplicated anterior MI 4 years ago.
- Worked on a loading dock until his MI; on disability status since.
- Recent tingling and numbness in his feet and complains of shortness of breath upon exertion.

Case 1: William: 56-Year-Old African American Male

- Physical Examination:
 - BP: 154/92 mmHg HR: 72 bpm
 - Wt: 216 lbs Ht: 5,10" BMI: 31.0 kg/m² WC: 38"
- General appearance: no apparent distress

Case 1: William: 56-Year-Old African American Male

Current Labs:

Creatinine: 0.73 mg/dL
BUN: 28 mg/dL
eGFR: 87 mL/min/1.73 m²
K+: 4.0 mg/dL
HbA1c: 7.8%
FBS: 140 mg/dL

Lipids:

- TC: 200 mg/dL
- LDL-C: 122 mg/dL
- HDL-C: 45 mg/dL
- Trig: 208 mg/dL
- Non-HDL-C: 155 mg/dL

Case 1: William: 56-Year-Old African American Male

Medications:

- Metformin 1000 mg bid
- Exenatide 5 mcg bid
- Aspirin 81 mg daily
- Simvastatin 20mg daily
- HCTZ 25 mg daily



William: 56-Year-Old African American Male

William's BP is 144/92 mmHg. What would be your target BP for him?

- a) <140/90 mmHg
- b) <135/85 mmHg
- c) <130/80 mmHg
- d) BP is mildly elevated, but leave as is



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William: 56-Year-Old African American Male

What should be his target LDL-C goal?

- a) <100 md/dL
- b) <70mg/dL
- c) <30 mg/dL
- d) <20mg/Dl

William: 56-Year-Old African American Male

What should be his target LDL-C goal?

- a) <100 md/dL
- b) <70mg/dL
- c) <30 mg/dL
- d) <20mg/Dl

What are the considerations for addressing Williams's HTN ?

- a) Add monotherapy ACEi or ARB
- b) Add clonidine
- c) Add combination amlodipine and ARB
- d) Try diet for 6 months

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Case 2

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Blood Pressure

Cheryl, 51-year-old African-American Female

Current Profile

| | |
|-------------------|-------------|
| Hypertension : | 12 years |
| Atenolol: | 50 mg QD |
| Serum Creatinine: | 0.9 mg/dL |
| Urine dipstick: | 2+ protein |
| Blood pressure: | 150/98 mmHg |



What is the best course of action for treating Cheryl's hypertension?

- a) Double the dose of atenolol to 100 mg/day
- b) Change atenolol to lisinopril/HCTZ combination 40/25 mg/day
- c) Add clonidine 0.3 mg/day
- d) Assess blood pressure at next 3 office visits before making decision



What is the best course of action for treating Cheryl's hypertension?

- a) Double the dose of atenolol to 100 mg/day
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Blood Pressure Management in T2DM: Current ADA Recommendations

Pharmacologic Therapy for Patients with Diabetes and Hypertension:

- A regimen that includes either an ACE inhibitor or an angiotensin receptor blocker (ARB)
- If one class is not tolerated, the other should be substituted
- Multiple-drug therapy (including a thiazide diuretic and ACE inhibitor/ARB, at maximal doses) is generally required to achieve blood pressure targets

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Case 3

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Case 3: Janet

Current Profile

| | |
|-----------|-----------|
| Atenolol: | 50 mg BID |
|-----------|-----------|

| | |
|-----------|---------|
| Ramipril: | 5 mg QD |
|-----------|---------|

| | |
|-------------------|-----------|
| Serum Creatinine: | 1.0 mg/dL |
|-------------------|-----------|

| | |
|-----------------|------------|
| Urine dipstick: | 2+ protein |
|-----------------|------------|

| | |
|-----------------|-------------|
| Blood pressure: | 138/88 mmHg |
|-----------------|-------------|

| | |
|-----------|-------------------------------|
| MDRD GFR: | 83 mL/min/1.73 m ² |
|-----------|-------------------------------|

GFR: glomerular filtration rate



What is Janet's renal status?

- a) Normal
- b) Stage 1
- c) Stage 2
- d) Stage 3



What is Janet's renal status?

- a) Normal
- b) Stage 1
- c) Stage 2
- d) Stage 3

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Case 4

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**Cardiovascular Considerations for
Antihyperglycemic Agents: DPP4 Inhibitors,
GLP-1 Receptor Agonists, SGLT2 inhibitors**

Case 4: 76-year-old T2D patient with history of MI and hypertension

Medical History:

- 76 y/o male with T2D, hypertension.
- Uncomplicated inferior wall MI 2 years ago.
- Evaluated on whether to treat patient's BP elevation considering his age.
- BP of SBP 145-150 mm Hg for several months.
- No cardiac symptoms and plays golf, without a motorized cart several days of the week. Non-smoker for 10 years; Occasional wine with meals

Medications: He is on a low dose aspirin 81 mg daily, metoprolol XL 50 mg daily, atorvastatin 40 mg dail and an enalapril 20 mg daily.

Exam: BP 148/78 mmHg left and 142/75 mm Hg right-sitting. HR 55bpm Oriented times: 3; no acute distress.

No significant findings

Wt. 183 lbs and BMI 26.3 kg/m², WC 99 cm.

Case 4: 76-year-old T2D patient with history of MI and hypertension

He had a positive stress exercise test and a coronary angiogram that revealed two vessel non-obstructive coronary disease.

Labs

LDL-C of 65 mg/dL & HDL-C is 49

Fasting triglycerides: 95 mg/dl.

Blood glucose A1c was 6.8 percent. Resting fasting blood glucoses have been 107 and 113 mg/ dL.

- eGFR: 42 ml/min/1.73m²
- Potassium 4.2 mEq/L
- Urine albumin-creatinine ratio 356 mg/g

Would additional BP lowering be evidence-based and beneficial for CVD outcomes?

- a) No, in view of his age
- b) Yes, despite his advanced age
- c) No, because close to goal <140/90 mmHg with diabetes
- d) There are no data at his age for benefit

Would additional BP lowering be evidence-based and beneficial for CVD outcomes?

- a) No, in view of his age
- b) **Yes, despite his advanced age**
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What BP medication intervention change would be most effective?

Presently: metoprolol XL 50 mg daily and an enalapril 20 mg daily.

- a) Increased dose of enalapril
- b) Increased dose of metoprolol
- c) Add an angiotensin receptor blocker (ARB)
- d) Add a calcium channel blocker (CCB)

What BP medication intervention change would be most effective?

Presently: metoprolol XL 50 mg daily and an enalapril 20 mg daily.

- a) Increased dose of enalapril
- b) Increased dose of metoprolol
- c) Add an angiotensin receptor blocker (ARB)
- d) **Add a calcium channel blocker (CCB)**