

CASE 4

Level of
Therapeutic
Difficulty:

3

Systolic Hypertension; Diabetes Mellitus; Renal Dysfunction; and the Use of ACE Inhibitors in African-American Population

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▼ CASE 4 SCENARIO

Patient and Setting: AB, a 72-year-old African-American male; primary care clinic
Chief Complaint: Fatigue; nocturia
History of Present Illness: Patient has been reassigned to a different MCO; presents to new primary care physician to establish care and receive refills; has been doing well except for late afternoon fatigue during the past 30 days and difficulty sleeping due to frequent urination; occasional dizziness
Past Medical History: DM, type 2 for 15 years; hypertension for 10 years
Past Surgical History: Tonsillectomy, age, 12; Right herniorrhaphy, 5 years ago
Family/Social History: Retired railroad worker; lives alone; usually eats prepared foods and “fast food”; uses smokeless tobacco; denies alcohol use; mother, stroke, age 62; father, MI, age 72; sister, diabetes
Medication History: Lisinopril 10 mg tab po qd; glyburide 10 mg tab po qd; occasional use of OTC naproxen 200 mg tab po
Allergies: Penicillin—rash

Physical Examination:

GEN: WD WN male; AO x 3
VS: BP 166/78; HR 76; RR 16; Ht 175 cm (5’9”); Wt 78 kg (172 lbs)
HEENT: Fundi: copper wiring; mild arteriolar narrowing; mild AV nicking; a few microaneurysms
COR: RR; sharp heart sounds; no murmur
CHEST: Good chest excursion and breath sounds; no wheezes or rales
ABD: Soft, nontender, without masses, organomegaly, AAA, or bruits; well-healed right inguinal scar
GU: Slightly enlarged prostate
RECT: Heme (-) without masses
EXT: 2/4 pedal pulses; warm with slight decreased pin prick in feet; 1+ edema

NEURO: CN, motor, cerebellar, and reflexes normal

Results of Pertinent Laboratory Tests, Serum Drug Concentrations, and Diagnostic Tests:

HbA_{1c}: 8.5
 BUN: 30
 SCr: 1.5
 Glu: 265
 Serum electrolytes: normal (K 4.5)
 CBC: WNL
 Lipid panel: WNL
 2+ proteinuria
 1-2+ glucosuria
 ECG: nonspecific ST-T wave changes

CASE 4 PROBLEM LIST

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2. _____
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4. _____
5. _____

▼ Case 4 SOAP NOTE

S: _____

O: _____

A: Problems:

1. _____

2. _____

3. _____

4. _____

5. _____

P: Problem 1: _____

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Problem 2: _____

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Problem 3: _____

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Problem 4: _____

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Problem 5: _____

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CASE 4 QUESTIONS

1. A potential recommendation for optimizing AB's lisinopril therapy is: (EO-12,18)

- a) Increase dose to 20-40 mg qd
- b) Decrease dose to 5 mg qd
- c) Discontinue lisinopril
- d) Change therapy to enalapril 5 mg qd

2. What should be the goal for the treatment of AB's SBP and DBP based upon JNC-VI guidelines? (EO-12,13)

- a) 140/90
- b) 130/80
- c) 120/85
- d) 130/85

3. Once adequate titration is achieved, how might the healthcare provider adjust antihypertensive therapy to enhance adherence? (EO-8,12,17)

- a) Use fixed-dose combination of lisinopril and propranolol
- b) Use fixed-dose combination of lisinopril and hydrochlorothiazide
- c) Change therapy from lisinopril to enalapril 5 mg po b.i.d.
- d) Change therapy to propranolol extended release 120 mg b.i.d.

4. ACE inhibitors exert renoprotective effects by: (EO-7)

- a) Increasing glomerular capillary pressure
- b) Increasing protein excretion
- c) Decreasing glomerular filtration pressure
- d) Increasing glomerular filtration pressure

5. Identify the patient population that may need higher dosages to enhance the antihypertensive efficacy of ACE inhibitors. (EO-3,18)

- a) Elderly
- b) African Americans
- c) Females
- d) Native Americans

6. What is the most probable cause for AB's proteinuria and decreased renal function? (EO-1)

- a) Diabetes
- b) Peripheral neuropathy
- c) Hyperlipidemia
- d) History of smokeless tobacco use

7. Which of the following should be included in AB's plan relative to pharmacoeconomic considerations? (EO-17)

- a) Lives alone; no support system
- b) Acquisition costs of medication
- c) Costs related to medications, quality of life, and morbidity and mortality
- d) Fear of potential stroke secondary to poorly-controlled hypertension

8. Which of the following psychosocial factors may adversely affect AB's adherence to both pharmacologic and nonpharmacologic therapy? (EO-15)

- a) Poor coordination and consistency of care when changing managed care plans
- b) Increased efficacy of medications
- c) Selection of the most cost-effective agent
- d) Use of combination products in order to decrease number of daily doses

9. Identify the 2 maladies in AB's case for which ACE inhibitors are indicated. (EO-8,13,18)

- a) Hyperlipidemia and diabetes
- b) Diabetes and neuropathy
- c) Hypertension and proteinuria
- d) Neuropathy and proteinuria

10. During the patient interview on follow-up visit, the healthcare provider notes difficulty obtaining responses because of AB's persistent coughing. This may be a side effect of which of the following medications? (EO-10,15)

- a) Lisinopril
- b) Glyburide
- c) Acetaminophen
- d) Hydrochlorothiazide

See test forms on page S161.