

CASE 6

Level of
Therapeutic
Difficulty:

3

Alcoholic Cardiomyopathy; Hypertension

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▼ CASE 6 SCENARIO

Patient and Setting: DN, a 49-year-old white male; seen in emergency department

Chief Complaint: Shortness of breath (dyspnea) and fatigue

History of Present Illness: 3-month history of progressive fatigue while playing golf; 1 month h/o of dyspnea; uses 2 pillows at night to sleep; recently read about Avapro, ACE inhibitor use, and JNC-VI guidelines on the Internet; Cardiac catheterization (8 months ago) showed clean coronaries; decreased ejection fraction 0.3 (30%)

Past Medical History: Hypertension

Past Surgical History: Benign renal cysts (L kidney), removed 4 years ago; cholecystectomy, 5 years ago; appendectomy, 5 years ago

Family/Social History: Practices law in his own firm; married, 2 children; 20 pack per year history of cigarette smoking, quit 5 years ago; ingests between 10 to 12 drinks of bourbon a day for at least 20 years; mother, age 86, has Alzheimer's Disease; father, died, age 54 during angioplasty; twin sister, died of breast cancer at age 25

Medication History: Nifedipine, extended release 30 mg tab po qd; occasional alprazolam 0.5 mg tab "for nerves" — states 2 tablets per week; multiple vitamins, buys sildenafil on the Internet, takes 1 to 2 tablets every week to every-other week

Allergies: Eggs; erythromycin—hives and upset stomach

Physical Examination:

GEN: WD WN AO x 3

VS: BP 160/96; HR 120; RR 22; Ht 167 cm (5'6"); Wt 81 kg (178 lbs) (BMI 29)

HEENT: Neck vein distention at 45 degrees; filling from below

COR: Tachycardia; S3/S4

CHEST: Bibasilar rales

ABD: Liver edge down 4 finger widths; liver span 12 cm; no ascites

GU: (-)

RECT: Hemocult (-)

EXT: Normal pulses, trace pedal edema

NEURO: (-)

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

Electrolytes; BUN; SCr: normal

Glucose: 104

CBC: normal

Lipid panel: normal

Bili: 2.4

LDH: 300

AST: 68

ALT: 40

GGT: 600

Alb: 3.0

PT: normal

UA: urobilinogen +

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CASE 6 PROBLEM LIST

1. _____
2. _____
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4. _____
5. _____

▼ Case 6 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 6 QUESTIONS

1. Which of the following represents the most objective finding to establish a diagnosis of CHF in DN?

(EO-2)

- a) Dyspnea on exertion
- b) 3 months of fatigue
- c) Neck vein distention
- d) Ejection fraction of 30%

2. One week following initiation of antihypertensive therapy, DN presents to the emergency room complaining of shortness of breath and swelling of the lips and tongue.

Which of the following medications is the most probable cause? (EO-10)

- a) Alprazolam
- b) Hydrochlorothiazide
- c) Nifedipine
- d) Lisinopril

3. Which pharmacodynamic property of ACE inhibitors makes them desirable in CHF? (EO-7,8)

- a) Increased preload
- b) Increased mean arterial pressure
- c) Decreased stroke volume
- d) Decreased preload

4. Which of the following lifestyle modifications would be most beneficial to lower blood pressure in DN's situation? (EO-8,11)

- a) Transcendental meditation
- b) Increase intake of garlic in diet
- c) Reduce alcohol intake
- d) Exercise 15 minutes once weekly

5. Which ACE inhibitors, not requiring hepatic activation to active metabolites, may be preferred agents for DN in light of his liver dysfunction? (EO-4)

- a) Captopril and lisinopril
- b) Captopril and enalapril
- c) Enalapril and fosinopril
- d) Fosinopril and benazepril

6. Which of the following therapeutic regimens would be most appropriate for DN? (EO-12,18)

- a) Digitalis, calcium channel blocker, and diuretic
- b) ACE inhibitor and diuretic
- c) Diuretic and clopidrogel
- d) ASA and diuretic

7. Which of the following psychosocial factors may impact DN's ability to adhere to medication therapy? (EO-15)

- a) Lack of financial resources
- b) Alcohol intake
- c) Lack of family support
- d) Educational level

8. Which of the following is a cardiovascular disease risk factor for DN? (EO-3)

- a) Past history of smoking
- b) History of renal cysts
- c) Cholecystectomy
- d) Family history

9. Drug interactions with ACE inhibitors include: (EO-8,9,10)

- a) Synergistic effects with NSAIDs in reducing hypertension
- b) Increased risk of hyperkalemia when combined with potassium supplements
- c) Increased risk of hyperkalemia when combined with lithium
- d) Increased digoxin levels

10. A mechanism of action of an ACE inhibitor is: (EO-6,7)

- a) It competitively blocks the conversion of angiotensin-I to angiotensin-II.
- b) It increases preload and afterload.
- c) It directly constricts arterial vasculature.
- d) Indirect vasoconstriction of venous capacitance vessel

See test forms on pages S162-S163.