Chapter 26: Dyslipidemia: I Need Refills Level II

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LEARNING OBJECTIVES

After completing this case study, the reader should be able to:

Identify patients who require treatment for dyslipidemia.

Stratify individual patients for risk of coronary heart disease (CHD) and stroke.

Determine appropriate LDL and non-HDL goals based on individual risk factors.

Recommend a cholesterol management strategy that includes therapeutic lifestyle changes (TLC), drug therapy, patient education, and monitoring parameters.

PATIENT PRESENTATION

Chief Complaint

“I need refills.”

HPI

Felecia A. Thorngrass is a 56-year-old woman who presents to pharmacotherapy clinic for intake. She has recently moved to your area, and states she has not seen her primary care provider for the last 11 months. Her prescriptions have expired, and she is coming to you for “refills.”

PMH

Obesity (BMI 31.5 kg/m^2)

Dyslipidemia × 4 years

HTN × 15 years

Postmenopausal—has not had GYN screening since onset of menopause (14 years ago)

FH

Father: age 74 with extensive cardiovascular history, most notably first MI at age 42.

Mother: died at age 61 from MVA, medical history unknown.

Patient has one older sister with HTN and history of “mini-strokes” and one younger sister with HTN only.

Her children’s medical conditions are noncontributory.

SH

Patient is married with three children, all of whom live out of state.

College graduate, works as librarian.

Admits to “social” alcohol and tobacco use, and to previous marijuana use when she visited her children.

Began sporadic exercise regimen when diagnosed with dyslipidemia.

Meds (Per Patient History; She Did Not Bring Records)

Metoprolol tartrate 50 mg PO BID

Ezetimibe 10 mg PO once daily

Aspirin 81 mg PO once daily

Ibuprofen 200 mg, four tablets PO PRN leg cramps

Naproxen 220 mg, two tablets PO PRN leg cramps

Garlic capsules

All

“Statin” drugs—states she had occasional leg cramps after starting atorvastatin.

ROS

Patient states that she just needs refills. She is argumentative about getting labs done and cannot understand why you would not just refill her medications. She denies any acute changes in health. She denies unilateral weakness, numbness/tingling, or changes in vision. She denies CP, and only has SOB when she walks in the park. With further questioning you find that she rarely exercises, but when she does go for a

walk she typically overdoes it. She denies changes in bowel or urinary habits and states she does not need to have GYN follow-ups anymore, because she has gone through “the change.” She denies any lower extremity edema.

Physical Examination

Gen

Obese, somewhat agitated Caucasian woman

VS

BP 162/92, P 89, RR 18, T 37.2°C; Wt 94 kg, Ht 5′8″

Skin

Warm and dry to touch, normal turgor, (–) for acanthosis nigricans

HEENT

PERRLA; EOMI; funduscopic exam deferred; TMs intact; oral mucosa clear

Neck/Lymph Nodes

Neck supple, no lymphadenopathy, thyroid smooth and firm without nodules

Chest

CTA bilaterally, no wheezes, crackles, or rhonchi

Breasts

Normal, slightly fibrotic, no lumps or discharge

CV

RRR, no MRG, normal S_1 and S_2; no S_3 or S_4

Abd

(+) BS, no hepatosplenomegaly

Genit/Rect

Deferred

Ext

No pedal edema, pulses 2+ throughout

Neuro

No gross motor-sensory deficits present

Labs (Fasting)

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Na 142 mEq/L	Ca 8.2 mg/dL	*Fasting lipid profile*
K 4.9 mEq/L	Mg 2.0 mEq/L	TC 240 mg/dL
Cl 103 mEq/L	AST 28 units/L	HDL 41 mg/dL
CO_2 23 mEq/L	ALT 31 units/L	LDL 163 mg/dL
BUN 16 mg/dL	T. bili 0.5 mg/dL	TG 183 mg/dL
SCr 0.9 mg/dL	T. prot 7.1 g/dL	hsCRP 4.6 mg/L
Glucose 105 mg/dL		
Hgb 11.6 mg/dL		
Hct 34%		

Assessment

Mrs Thorngrass is an obese Caucasian woman who presents to pharmacotherapy clinic for intake. She has a significant family history of cardiovascular disease. She has uncontrolled HTN, treated with metoprolol tartrate, and dyslipidemia, treated only with ezetimibe and garlic. She reports an allergy to atorvastatin, but admits that her leg cramps have not improved since discontinuing the drug and coincide with her rare bouts of exercise. She reports liberal use of ibuprofen and naproxen to relieve the cramps. She also has previously undiagnosed anemia.

QUESTIONS

Problem Identification

1.a. What drug-related problems does this patient have?

1.b. What laboratory values indicate the presence and severity of dyslipidemia in this patient?

1.c. What are the patient's risk factors (both modifiable and nonmodifiable) for cardiovascular disease?

1.d. What is this patient's risk classification for cardiovascular disease, and how does this relate to her individual therapy?

Desired Outcome

2. What are the pharmacologic and nonpharmacologic treatment goals for this patient?

Therapeutic Alternatives

3.a. What nonpharmacologic therapies are necessary for this patient to achieve and maintain target cholesterol values?

3.b. What pharmacotherapeutic options are available for controlling this patient's dyslipidemia and preventing future CVD events?

Optimal Plan

4.a. Design a plan that details specific lifestyle modifications for this patient.

4.b. Develop a specific pharmacotherapeutic regimen for this patient's dyslipidemia and uncontrolled HTN.

4.c. What options are available if the pharmacotherapy regimen you chose fails, or if she develops an adverse drug reaction?

Outcome Evaluation

5. Based on your treatment regimen, what are the monitoring parameters for each pharmacologic agent selected?

Patient Education

6.a. Based on your recommendations, provide appropriate education to this patient regarding pharmacologic and nonpharmacologic treatments.

6.b. What steps can you take to ensure that patient is successful in implementing nonpharmacologic measures?

CLINICAL COURSE: ALTERNATIVE THERAPY

Mrs Thorngrass is already taking garlic capsules, but she is not sure about the type or dose. Because you are making changes to her current prescription regimen, you need to investigate the advisability of continuing the garlic. If Mrs Thorngrass does begin a statin drug as indicated, she would not be able to take red yeast rice, a common supplement used for dyslipidemia, because it contains mevacolin K, a lovastatin analog, and would be duplicative therapy. Would fish oil be a possible option for her? See Section 19 in this Casebook for questions about the use of garlic and fish oil for treatment of dyslipidemia.

SELF-STUDY ASSIGNMENTS

1. Describe how this patient's other drug/disease interaction issues that are unrelated to dyslipidemia should be managed.
2. What changes, if any, would you make to the pharmacotherapy regimen for this patient if she had presented at the initial visit with each of the following characteristics:

- Childbearing age
- Cirrhosis of the liver
- Renal disease
- Significant alcohol use

CLINICAL PEARL

Rosuvastatin is FDA-approved to decrease risk of stroke, MI, and need for revascularization procedures in men and women without evidence of CHD and normal LDL, if they are considered to be at increased risk based on age, elevated hsCRP, and one or more additional risk factors.

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