Cardiovascular Diseases in HIV and Aging

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Educational Objectives
By the end of the session, learners will be able to:

1. Describe two risk factors for cardiovascular diseases in HIV-infected patients.
2. Outline an evaluation of cardiovascular diseases in HIV-infected patients.
3. Explain how to modify two cardiovascular risk factors in HIV-infected patients.

Suggested reading:

This case is part of a case-study series on common diseases in aging HIV-infected patients. New cases will be posted monthly on our website. Users should first download the learner portion or read on below, review the suggested reading, and answer the case questions. When you’re ready to check answers, download the answer key to do so. Please contact Ken South at ken@aahivm.org if you’d like more information on the series.

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CASE ONE:

Mr. Heart is a 70-year-old man who comes to your office to establish care. He has a history of HIV. His last CD4 was 500 cells/mm³ with an undetectable viral load. He takes atazanavir, ritonavir, emtricitabine and tenofovir. Otherwise, he has a history of hypertension, hyperlipidemia, and diabetes. His other medications include lisinopril 20mg daily, simvastatin 20mg daily, and metformin 1000mg daily.

Mr. Heart mentions that one of his best friends just had a heart attack, which scared him. He wants to do everything he can to prevent heart disease.
Questions:

1. How does the prevalence rate of cardiovascular disease in HIV-infected patients differ from that in the uninfected?

2. What are the risk factors for cardiovascular disease in HIV patients? What are the traditional risk factors (ones also found in the uninfected)? What are risk factors related to HIV or its treatments?

3. What other questions would you ask Mr. Heart?

CASE ONE CONTINUED:

Mr. Heart states he is adherent with all of his medications, although he has not seen a doctor in about a year. His father died of a heart attack at age 50, while his mother died at age 70 from a stroke. She had hypertension and diabetes.

He used to snort cocaine but quit 15 years ago, after which he picked up tobacco smoking. He now smokes 1 pack per day. He drinks a glass of wine with dinner everyday.

Mr. Heart rarely cooks. He usually eats take-out hamburgers or pasta. He tires easily because of his weight and rarely exercises.

On exam, his pulse is 78, BP 160/95, oxygen saturation 99% on room air. His BMI is 40 kg/m². There are no abnormal findings on exam. His point-of-care fasting glucose was 85 mg/dl.

4. What cardiovascular risk factors does Mr. Heart have? How would you estimate cardiovascular risk for Mr. Heart based on his risk factor profile?

5. How would you modify Mr. Heart’s risk factors?

6. What workup would you order and how often would you order them?

CASE ONE CONTINUED:

On labs, his HbA1C is 6.5%. His total cholesterol is 195, HDL 53, LDL 110, triglycerides 162.

His BMP is normal and you increase lisinopril from 20mg daily to 40mg daily.
7. Is lipid-lowering treatment indicated for Mr. Heart? If yes, would you continue the current regimen of simvastatin 20mg daily?

8. Does Mr. Heart have hypertriglyceridemia? How would you manage it? What if his triglyceride level is more than 500mg/dl?

9. What would you do with Mr. Heart’s ART regimen? What regimen would you pick if he were treatment-naïve considering he has hyperlipidemia?

Additional reference:


