Case Study: Cardiovascular Agents

Introduction:
Many people live busy and active lives. They often don’t slow down to think about how their activities affect their health. This case study will allow the learner to evaluate potential client teaching and general drug considerations when using medications that treat cardiovascular disease.

Case Study: Georgia Everett

History & Physical:
Your next-door neighbor is Georgia Everett, a 48-year-old architect who lives a busy life. She is the cofounder of a local architectural firm and stays busy with her job as well as her family. She is married and has two teenage children. They are active in many outdoor activities, such as fishing and golf, and you have often seen her jogging with her husband in the early morning hours.

One morning, as you are going to the cardiology office where you work, Georgia’s husband Charles tells you that Georgia is going through some tests “for her heart” because she has been having some chest tightness and a choking sensation only when she jogs. He says that Georgia is worried about it because her father died at age 50 of a massive heart attack. He also says that Georgia has tried to watch her weight and live what she thought was a healthy lifestyle to prevent heart disease.

A few days later, you see Georgia and Charles in the cardiology office. They are there to get the results of Georgia’s testing. A treadmill exercise test done 2 weeks ago indicated the presence of some ECG (electrocardiogram) abnormalities with exercise, and Georgia underwent cardiac catheterization this week. The catheterization showed a 25% narrowing of a branch of the right coronary artery. She has been given prescriptions and is to meet with you to review modifiable and nonmodifiable risk factors, healthy lifestyle changes, and any questions about her prescriptions.

You have just completed reviewing the coronary artery disease risk factor assessment and teaching plan for Georgia and are preparing to discuss her medications with her.

Risk Factor Assessment and Teaching Plan
Everett, Georgia H.     MR 07261980     DOB: 10-07-1955     Jon Chiano, MD     Date: August 2, 2005

Diagnosis: Angina, stable, MI ruled out

Medications: ASA 81 mg daily, Atorvastatin (Lipitor) 20 mg at bedtime, Verapamil 80 mg tid, Transdermal nitroglycerin (Transderm-Nitro) 0.2 mg/hr daily for 12 hours, SL NTG (0.4 mg) prn chest pain

Risk Factors—Modifiable
Blood pressure: Today's BP 110/78. Has not had history of high BP. Plan: Will continue to monitor BP in follow-up visits.

Smoking: Pt does not smoke.

Physical Activity: Pt jogs two to three times weekly with her husband and plays golf on the weekends when possible. Plan: Begin walking short distances two to three times a week and increase distance and activities as tolerated. Bring SL NTG.


Type A Personality: Pt admits to having a "Type A+" personality. Plan: Will enroll in a local stress management therapy group with her husband.

Cholesterol Control: Labs (from July 30, fasting): Total cholesterol: 245 mg/dL, LDL: 200 mg/dL, HDL: 45 mg/dL, Triglycerides: 180 mg/dL. Plan: Discussed the new cholesterol-lowering prescription and strategies to reduce saturated fats and foods rich in cholesterol in her diet.

Diet Therapy: Reviewed current eating habits and identified w/pt several ways to add monounsaturated and polyunsaturated fats to her diet. Patient does not use salt in cooking. American Heart Association booklets and resources given to pt. Plan: Enroll in the hospital's free "Cooking For Your Heart" program.

Summary: Reviewed the modifiable risk factors and plans w/pt. Pt aware that she has a strong family history for CAD because her father died at age 50 of a massive heart attack. No other family history of CAD or related illnesses. She has tried to establish a healthy lifestyle through exercise and weight management but sees ways she can improve her diet and her response to stress. Next office visit scheduled for 1 month.

You have completed the risk factor assessment and teaching plan and are now reviewing the prescriptions with Georgia. Together, you write out a schedule of the medications and begin reviewing the educational pamphlets for each one.

- Aspirin therapy
- Transdermal nitroglycerin
- Antilipemic therapy
- Nitroglycerin for chest pain

Georgia is anxious about the new instructions and has several questions. Georgia is surprised that aspirin is on her list of medications. Once you explain its purpose, she asks, "Well, if one a day is good, why don't I go ahead and take two a day, just to be safe? It's just baby aspirin!" Your response to her is, "It only takes one low-dose aspirin a day to have beneficial effects. Taking more may cause other problems."

When reviewing use of the transdermal nitroglycerin patch, Georgia has questions about how to apply it and the possible side effects. You include in your teaching plan about transdermal nitroglycerin
"It's important to remove the nitroglycerin patch at night to allow an 8-hour 'patch-free' period. This helps to prevent your body from developing tolerance to the medication."

While discussing the antilipemic drug atorvastatin (Lipitor), you emphasize the importance of monitoring for side effects. You include in your teaching plan, "Because there is a risk for liver injury with this medication, we will monitor your liver function studies periodically. Injury to the liver is rare, but we need to be careful."

One weekend evening, 4 weeks after her cardiac catheterization, Georgia's daughter rings your doorbell and asks you to come and check her mother. When you go in, you see Georgia sitting on the couch in her jogging clothes. She says, "I did too much, and now I'm having that same 'chest choking.' It's not as bad as it was last month, but I forgot how to take these nitroglycerin pills." Your instructions should include: "Put one of these tablets under your tongue and let it dissolve there completely. Don't swallow it! We can give up to three tablets, 5 minutes apart, if needed, but let's see how this one works first." Her pain is relieved after one nitroglycerin tablet and you further instruct her on the use of the drug.