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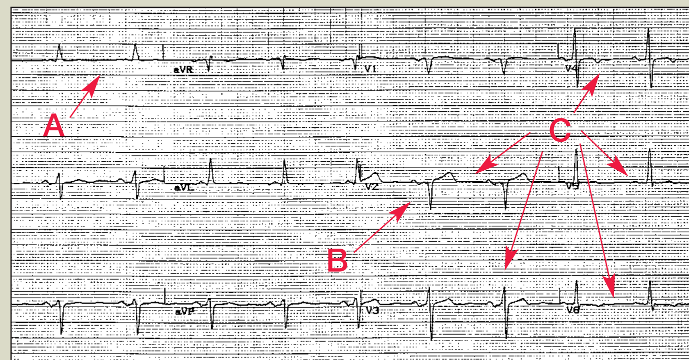
CASE

The patient is a 72-year-old man who was referred for a preoperative evaluation before surgery to remove a melanoma on his back. An ECG performed at the surgeon's office showed nonspecific ST-segment changes. The patient denied any history of coronary artery disease (CAD), MI, chest pain, or shortness of breath. His medical history was significant for hypertension, and his current medications consisted only of aspirin. The patient said he felt very well, was active, tried to follow a healthy diet, and had never experienced any significant medical problems.

The patient's cardiac risk factors included age, gender, and a positive family history for premature CAD. He was a nonsmoker. Laboratory studies disclosed the following values: LDL cholesterol, 153 mg/dL; total cholesterol level, 222 mg/dL; triglyceride level, 69 mg/dL; and HDL cholesterol level, 55 mg/dL. The non-HDL cholesterol level was 167 mg/dL. The 10-year Framingham risk score was 20%. An ECG done on the day of the clinic visit showed normal sinus rhythm with left axis deviation, and nonspecific T wave abnormalities in the anterolateral leads (see Figure 1). The patient's BP in clinic was 175/93 mm Hg.

FIGURE 1

Abnormalities on ECG



A = LAD (1>AVF); **B** = poor R wave progression; **C** = T wave changes

WHAT IS THE NEXT STEP?

- Proceed with surgery because the procedure is minor and can be performed under a local anesthetic
- Obtain a stress test to further delineate any disease
- Optimize medical management of risk factors, including hypertension and presumed coronary disease, and proceed with surgery

DISCUSSION

The 2003 American College of Cardiology/American Heart Association (ACC/AHA) guidelines promote a stepwise approach to the preoperative assessment of risk in coronary patients.[1] After careful clinical assessment, major, intermediate, or minor clinical predictors should be used to categorize the patient. The type of surgery to be performed and the degree of hemodynamic stress that will be encountered should be considered, and the patient's functional capacity (FC) should be assessed. Additionally, intangibles such as the effectiveness of the surgeon—for instance, is the surgeon known for long operating times or large blood loss in patients?—cannot be ignored.

Outcome This patient had several minor clinical predictors and an excellent FC. Minor clinical predictors include age, ECG changes, a low FC (in the absence of other indicators), uncontrolled hypertension, a history of stroke, or any arrhythmia other than sinus arrhythmia. The patient was initially sent home with hydrochlorothiazide for BP control and instructed to take a baby aspirin daily. The surgical procedure was minor, and under the ACC/AHA guidelines, it could be assumed to be safe to proceed. However, the surgeon wanted to use a general anesthetic and more than one minor predictor was evident, so a stress test was requested to further delineate any underlying disease. This showed evidence of a moderately sized area of ischemia at the apex and septum. The patient was started on a β-blocker and referred for catheterization. The results showed severe multivessel disease, including 100% occlusion of the left anterior descending and right coronary arteries. The circumflex artery was also severely stenosed in several places. Because of the severity of the distal disease, the patient was a poor risk for revascularization and opted for medical management. He was started on a statin and an ACE inhibitor, and the dosage of his β-blocker was optimized. He was also started on clopidogrel. As for his melanoma, this was excised under a local anesthetic.

Comment Clinical guidelines such as those from the ACC/AHA provide excellent criteria for evaluating a patient. Nevertheless, guidelines are not laws, and good clinical judgment must be used when determining a course of action. In this case, proceeding with the surgery as indicated by the guidelines may have resulted in a poor outcome for the patient. □

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REFERENCE

1. Eagle KA, Berger PB, Calkins H, et al. ACC/AHA guideline update for perioperative cardiovascular evaluation for noncardiac surgery executive summary: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1996 Guidelines on Perioperative Cardiovascular Evaluation for Noncardiac Surgery). *J Am Coll Cardiol*. 2002;39:542-553.