rapid rate or possibly the subsequent development of ischemia. The appropriate management of any patient who has experienced a cardiac arrest not related to a reversible mechanism (sepsis, pulmonary embolism) is to perform electrophysiology studies. The electrophysiology study is a reproducible method for studying the tachycardia and judging efficacy of antiarrhythmic drugs. If an antiarrhythmic drug can be found that prevents the provocation or induction of reproducibly induced ventricular tachycardia, there is an excellent chance (85-90 percent) that this drug will be effective at preventing a recurrence of the initial arrhythmia. For patients in whom a successful antiarrhythmic drug cannot be found, alternative therapies, such as the AICD (automatic implantable cardioverter defibrillator) are used. This therapy approaches 98 percent efficacy in preventing recurrent sudden cardiac death over a five-year period.

**COPD Exacerbation Associated with a Skin Rash**

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A 72-year-old man was admitted to the Fresno Veterans Administration Medical Center in January 1990 for evaluation of recurrent cough and progressive dyspnea. He developed a cough with productive sputum in November 1989, and despite use of inhaled β₂-stimulants, the cough and dyspnea persisted. Nephrotic syndrome (urinary protein, 8 g/24 h) was diagnosed in February 1988, for which he was prescribed prednisolone 20 mg/day, furosemide 40 mg/day, and metolazone 5 mg/day; he was taking these medications up to the time of his hospital admission. He had a 30 pack/year history of smoking. He had never previously experienced such severe symptoms of bronchitis.

He was born in Tennessee where he lived until age five years, then moved to Virginia. He had spent 14 months in West Africa in 1942 in World War II as an Air Force gunner. He was discharged from the Service in 1945, after which he spent one year in Louisiana. He moved to California in 1946 and remained there ever since.

On physical examination he was afebrile; blood pressure was 130/70 mm Hg, and pulse rate was 72 beats per minute; bilateral wheezing was noted on lung examination. Findings from the rest of the examination were unremarkable. The FEV₁, was 2.0 L (predicted, 2.8 L); FVC was 3.2 L (predicted, 4.2 L); FEV₁/FVC was 63 percent. Chest roentgenogram did not reveal any focal abnormality. Hemoglobin was 12.9 recurrent, which may have been the situation in this case. Calcium channel blockers may improve coronary blood flow through vasodilatation and inhibition of coronary spasm, but despite these attractive features, their routine use in the uncomplicated acute myocardial infarction is not recommended. A review of studies analyzing the effect of routine use of calcium-channel blockers in the setting of acute myocardial infarction shows no benefit from this intervention and in fact suggests that their use may be associated with a slightly increased mortality. Like nitroglycerin, however, calcium channel blockers may be of benefit when ischemic chest pain persists, especially if coronary spasm is suspected.

Blood gas analysis in this case demonstrated significant hypoxemia with evidence of lactic acidosis. The acidosis is most likely due to cardiogenic shock with
Answer: (d) *Disseminated Strongyloides infection*

Stool examination revealed rhabditiform larvae of *Strongyloides stercoralis*; these live parasites were also found in the sputum.

Generally speaking, moderate to severe respiratory distress due to COPD correlates with an FEV₁ of 1 L or less. When there is a discrepancy between symptoms and spirometry, a more thorough evaluation is necessary. Cricopharyngeal dysfunction or gastroesophageal reflux may, in patients with airflow obstruction, contribute to dyspnea. Multiple pulmonary emboli are a well-known cause of dyspnea and may also result in wheezing. Cutaneous urticarial-like drug reactions could result from either metoclopramide or cimetidine, but migrating urticarial skin reactions would be unusual.

**DISCUSSION**

"All that wheezes isn’t asthma" is a well-known medical maxim. Some of the less common causes of wheezing include heart failure, recurrent gastroesophageal reflux, pulmonary emboli, bronchiectasis, endobronchial and tracheal tumors, recurrent laryngeal nerve palsy, and goiter. "Asthma" as the presenting feature of pulmonary strongyloidiasis infection has been described.¹ In the case described above, several classic predisposing factors were present that include (1) upbringing in the southeast, (2) foreign travel that included spending 14 months in West Africa under poor sanitary conditions, and (3) use of prednisone for a prolonged period. Other factors that have been identified include hematologic malignancy and achlorhydria.²,³ Unusual features in this case include the prolonged time span between infection and diagnosis (>48 years) and the temporal relation between the use of cimetidine and the development of the skin rash. Dissemination related to cimetidine has been noted in two previous cases.⁴,⁵

*Strongyloides stercoralis* infection is endemic in the southeastern United States where it exists in the soil. In the University of Kentucky and Lexington Veterans Administration Hospitals, it is the most common parasite identified.⁶ It was found in 27.5 percent of ex-prisoners of war in southeast Asia.⁷ It is also widely distributed in the tropics. Infection is acquired when worms penetrate the skin. They pass via the bloodstream to the lungs where they ascend the respiratory tract and are swallowed and pass into the gastrointestinal tract. Common gastrointestinal symptoms include diarrhea, abdominal pain, and tenderness. Dissemination may result in intracutaneous wanderings of the larvae that present as a rash known as "larva currens" (Fig 1). It has often been accompanied by an urticarial-like rash. Authors have noted the rapid movement of the larvae across the skin. Pulmonary symptoms include cough and wheezing; fleeting pulmonary infiltrates may be seen roentgenographically. Eosinophilia may not be present in those receiving prednisone. The diagnosis is made by microscopic examination of stool samples. Parasites may also be found in sputum.⁸ The disease may be fatal in those receiving corticosteroids when its recognition is delayed.⁹ Gastric acidity may be protective in preventing dissemination. The temporal relationship between administration of cimetidine and cutaneous manifestation of Strongyloides in this patient again suggests that cimetidine may have contributed to its most recent dissemination. Treatment with thiabendazole is effective in almost all patients.

Following one week of thiabendazole therapy, the productive cough, wheezing, and skin rash completely resolved; no further intestinal parasites were found.

**REFERENCES**