A 64-year-old woman had been experiencing short episodes of rapid regular heart beating for nearly a year. The bouts became frequent and lengthy, resulting in a hospital admission a month earlier when intravenously administered adenosine terminated an episode. She was discharged on diltiazem, but the bouts of tachycardia continued and were accompanied by light-headedness and sometimes nausea. When she returned to the hospital with one of these episodes, a narrow QRS complex tachycardia again was documented and again was terminated by adenosine (Figures 1 and 2).

In the hospital, episodes of tachycardia continued, but adenosine frequently was ineffective; the episodes would end spontaneously after varying periods. In addition, many of the episodes were now wide QRS complex tachycardias (Figure 3), and the patient became dyspneic for the first time. Amiodarone was given, first intravenously and then by mouth, and in time all episodes of tachycardia ceased and dyspnea disappeared.

Regular wide QRS complex tachycardias often are difficult to diagnose. Brugada et al (1) and Vereckei et al (2) each have used stepwise approaches, incorporating four somewhat different criteria, with high rates of accuracy as judged by electrophysiological studies. Both groups found A-V dissociation to be 100% specific for ventricular tachycardia. However, A-V dissociation could be identified in fewer than 25% of patients with ventricular tachycardia, and most diagnoses were made from various morphologic characteristics of the QRS complexes (1, 2).
Both A-V nodal reentrant tachycardia and A-V reciprocating tachycardia usually occur in patients with so-called structurally normal hearts, but ventricular tachycardia rarely does so. Our patient has had systemic arterial hypertension since she was a young woman and has known of a heart murmur for many years. She never had symptoms, however, until the tachycardias began. Echo-Doppler studies obtained during her recent admissions have shown left ventricular hypertrophy and dilatation with a reduced ejection fraction of 40% and a restrictive filling pattern, bialtrial dilatation, severe mitral regurgitation with morphologically normal leaflets and annular dilatation, and an elevated pulmonary arterial systolic pressure of 40 mm Hg. She has been scheduled for mitral valvular repair.