A 94-year-old asymptomatic woman was sent to the Emergency Room after being found to have an irregular pulse. An ECG showed a wide-complex tachycardia with right bundle-branch block morphology with a ventricular rate of 120 to 150 bpm. Her hemodynamics remained otherwise stable. The tachycardia persisted despite trials of adenosine, diltiazem, lidocaine, and procainamide. Because it was not clear whether this rhythm was ventricular tachycardia or a supraventricular tachycardia with aberrant conduction, we placed a transesophageal lead to further define the rhythm. The transesophageal lead demonstrated marked disparity between the atrial and ventricular rates, with the ventricular rate exceeding the atrial rate, thus confirming the diagnosis of ventricular tachycardia. She was treated with electrical cardioversion and returned to normal sinus rhythm.

In some cases, differentiating ventricular tachycardia from supraventricular tachycardia when confronted with a wide-complex tachycardia can be quite difficult, yet it is obviously imperative for the clinical management of the patient. The placement of a transesophageal lead, which can be done quite easily at the bedside, can be quite helpful in clarifying the issue.

Figure 1. ECG from a 94-year-old woman with wide-complex tachycardia refractory to adenosine, diltiazem, lidocaine, and procainamide.

Figure 2. Esophageal lead demonstrating marked disparity between atrial and ventricular rates, with ventricular rate exceeding atrial rate, confirming a ventricular source of arrhythmia. Diagnosis: ventricular tachycardia. a indicates atrial activity; v, ventricular activity; and E, esophageal lead.
Wide-Complex Tachycardia
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