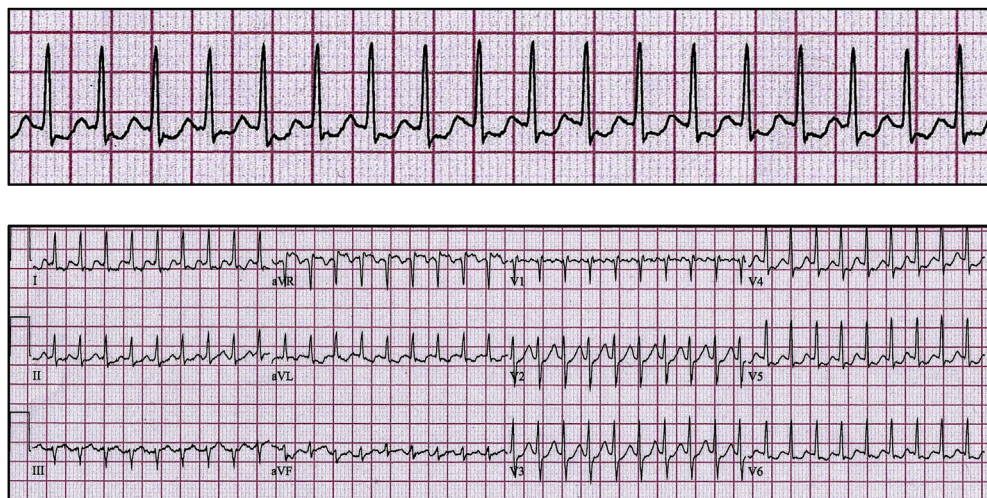


William J. Brady, MD; Amal Mattu, MD; Justin O. Cook, MD; Jeffrey Tabas, MD

0196-0644/\$-see front matter

Copyright © 2016 by the American College of Emergency Physicians.

<http://dx.doi.org/10.1016/j.annemergmed.2016.01.012>

**Figure 1.** ECG (rhythm strip [upper] and 12-lead ECG [lower]) demonstrating a rapid, regular, narrow QRS complex rhythm with a ventricular rate of approximately 230 beats/min.

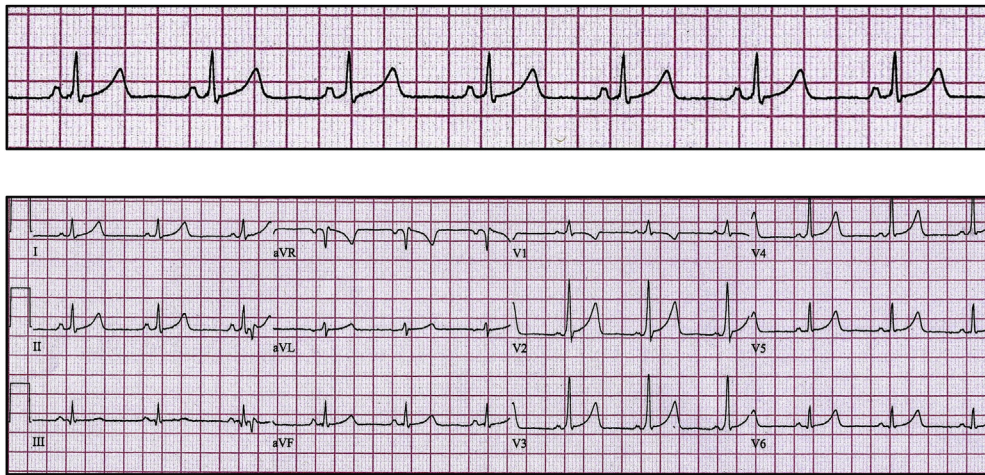
[Ann Emerg Med. 2016;68:674-677.]

## CASE PRESENTATION

A 26-year-old woman with a history of Wolff-Parkinson-White's syndrome presented to the emergency department with palpitations associated with weakness and recent syncope. She denied chest pain, dyspnea, or other significant complaints. Her only medication was an implanted birth control agent; she denied illicit substance exposure. On examination, she was alert and oriented, in no apparent distress. Her blood pressure was 97/71 mm Hg and pulse rate on the monitor was approximately 230 beats/min, with a wide complex rhythm (Figure 1A). A 12-lead ECG was obtained (Figure 1B).

What is the rhythm diagnosis and the most appropriate treatment(s)?

*For the diagnosis and teaching points, see page 675.  
To view the entire collection of ECG of the Month, visit [www.annemergmed.com](http://www.annemergmed.com)*



**Figure 2.** ECG (rhythm strip [upper] and 12-lead ECG [lower]) demonstrating sinus rhythm with the classic triad of Wolff-Parkinson-White's syndrome with a shortened PR interval (best seen in leads V2 and V3),  $\Delta$  wave, and minimally widened QRS complex.

## ECG OF THE MONTH

(continued from p. 674)

### ECG ASSESSMENT

The ECG revealed a rapid ventricular rate of 230 beats/min, with a normal QRS complex width and regular rhythm. No P waves were noted.

### CLINICAL COURSE

The rhythm was interpreted as a regular, narrow QRS complex tachycardia, most consistent with either atrioventricular nodal reentrant tachycardia or orthodromic tachycardia of Wolff-Parkinson-White's syndrome (orthodromic atrioventricular reentrant tachycardia).

The physician was concerned about the possibility of atrioventricular reentrant tachycardia and thought that atrioventricular nodal-blocking agents were contraindicated in this presentation. Thus, intravenous procainamide (loading dose of 17 mg/kg) was initiated, with a planned infusion during 45 minutes. After approximately 10 minutes of infusion, the patient's blood pressure decreased to 68/52 mm Hg, with the development of lethargy. Synchronized electrocardioversion restored normal sinus rhythm with the ECG triad of Wolff-Parkinson-White's syndrome (shortened PR interval,  $\Delta$  wave, and minimally widened QRS complex) (Figure 2).

### DISCUSSION

Ventricular pre-excitation syndromes result from an abnormal electrical connection of atrial to ventricular tissues. They are associated with the development of various supraventricular tachydysrhythmias. Wolff-Parkinson-White's syndrome is the most commonly encountered form of ventricular pre-excitation. It is diagnosed when the triad of ECG findings is present (when in sinus rhythm) and symptomatic tachydysrhythmias are noted; dysrhythmias are noted when either the actual rhythm is observed or symptoms consistent with a dysrhythmia is documented (eg, palpitations, syncope). In sinus rhythm, the classic triad of Wolff-Parkinson-White's syndrome (shortened PR interval, a  $\Delta$  wave, and widened QRS complex) is observed (Figure 2 and Figure E1 [available at <http://www.annemergmed.com>]).<sup>1</sup> The 4

Download English Version:

<https://daneshyari.com/en/article/5652019>

Download Persian Version:

<https://daneshyari.com/article/5652019>

[Daneshyari.com](https://daneshyari.com)