CASE REPORT

Malignant vasovagal syndrome in two patients with Wolff-Parkinson-White syndrome

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The presence of Wolff-Parkinson-White (WPW) syndrome in patients presenting with syncope suggests that tachyarrhythmia may be the cause. However, the symptoms require careful evaluation. Two young patients presented with syncope and were found to have WPW syndrome on their ECG. In both patients symptoms were suggestive of vasovagal syncope. During tilt testing, both the patients developed their typical symptoms with a fall in blood pressure and heart rate confirming the diagnosis of malignant vasovagal syndrome.

Wolff-Parkinson-White (WPW) syndrome is commonly associated with arrhythmias. We report two patients with WPW syndrome referred with collapses. Tilt testing showed malignant vasovagal syndrome. Although tachyarrhythmias are the most common causes of symptoms in patients with WPW syndrome, it is important to look for other causes.

CASE REPORTS

Our first patient was a 25 year old women referred with a history of several collapses with a diagnosis of WPW syndrome. Each episode was described as a feeling of dizziness and nausea followed by loss of consciousness for a couple of minutes. The episodes happened when she was standing or sitting. She also complained of palpitations lasting for a short period, but this symptom was not associated with dizziness or loss of consciousness. Her ECG showed WPW syndrome (fig 1). Ambulatory monitoring did

not show any arrhythmia. During a tilt test, she developed her typical symptoms with asystole lasting for several seconds (fig 2). She was advised to avoid prolonged standing and dehydration. However, the episodes of blackouts continued and a permanent pacemaker was implanted in July 2000. She has remained symptom-free since pacemaker implantation.

The second patient was a 19 year old man referred with a history of collapse. He had had four episodes in the preceding month during which he felt dizzy and collapsed. There was no warning and he lost consciousness for a short time only. The episodes occurred when he was standing and there was no history of palpitation. His clinical examination was unremarkable. His ECG showed type A WPW syndrome. He underwent ambulatory monitoring, which did not show any arrhythmias. During the tilt test, he developed dizziness and hypotension on the second minute of the test. His blood pressure dropped to 60/40 mm Hg from a baseline of 130/80 mm Hg. His symptoms were similar to what he had experienced during previous collapses.

DISCUSSION

WPW syndrome has been reported to occur in 0.1–3.0 per thousand in an apparently healthy population.¹ Arrhythmias are common in these patients. The most common arrhythmias are reciprocating tachycardia and atrial fibrillation. The occurrence of syncope in these patients is regarded as an alarming event because of the possibility of rapid ventricular response to atrial fibrillation, which may result in sudden death.

The incidence of syncope in WPW syndrome has been reported to be between 19–36% in study populations.^{2–4} The

Figure 1 ECG showing Wolff-Parkinson-White syndrome.

Figure 2 Prolonged sinus arrest during the tilt testing.

young patient with unexplained syncope often presents a difficult diagnostic dilemma. None of our patients had palpitations either before or after the event. Arrhythmias were not found in standard and ambulatory ECG recordings.

The usefulness of tilt testing in the diagnosis of unexplained syncope is well supported.⁵ In our first patient, the tilt test showed a significant pause corresponding with the symptoms (fig 2). Since pacemaker implantation in July 2000, she has been followed up regularly and has remained symptom-free. In our second patient, during the tilt test, there was a major drop in blood pressure and slowing of heart rate with corresponding symptoms. This suggested mainly the vasodepressor component in this patient.

In conclusion, WPW syndrome is a common entity. Tachyarrhythmias are common and may result in dizziness and syncope in these patients. However, it is important to look for another explanation for the syncope in young patients, as pre-excitation on ECG by accessory pathway may be coincidental. Treatment should be directed towards the correction of the most probable cause.

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