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Pre-excited atrial fibrillation in a patient with two accessory pathways

Fibrilación auricular preexcitada en paciente con dos vías accesorias

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Palabras Clave: *Fibrilación auricular, Vía accesoria, Wolff-Parkinson-White, Preexcitación ventricular*

A 38-year-old man with unremarkable pathological history came to the health care center due to a first event of irregular, rapid and well-tolerated palpitations, but which did not stop after six hours. The electrocardiogram during his first medical contact (**Figure 1**) showed an irregular tachycardia, with wide QRS complexes, mean heart rate of 193 beats per minute, morphology of right bundle branch block and superior axis, which was correctly interpreted as an atrial fibrillation by accessory pathway (AP), hence, synchronized electrical cardioversion was performed, which restored sinus rhythm. The posterior electrical trace showed a sinus rhythm with short PR interval and positive delta wave in I, aVL and all precordial leads, and negative in III and aVF, corresponding to a Wolff-Parkinson-White syndrome (**Figure 2**). The blood count, blood chemistry and transthoracic echocardiogram were normal. The patient was transferred to the reference hospital where an electrophysiological study (mapping of the mitral annulus) and radiofrequency ablation (15-18 seconds application) of a left posterior AP was performed. However, there was a recurrence five minutes later, thus, a new mapping was performed from both annuli (mitral and tricuspid) and another AP was detected, being a right posteroseptal one. Therefore, the stable application of radiofrequency ends the tachycardia and disappears the delta wave; outcome that was maintained during more than 20 minutes of waiting. The patient evolved favorably and was discharged 36 hours after the procedure.

Wolff-Parkinson-White electrocardiographic pattern appears in patients who have an atrio-ventricular AP and present a manifest pre-excitation of the ventricular myocardium, since AP conduction is faster than through the regular conduction system. In these cases, the presence of atrial fibrillation with preferential conduction through the AP represents a life-threatening event, since it can degenerate into ventricular fibrillation. The identification of this type of arrhythmia is essential in order to establish an adequate therapeutic approach, since the use of drugs that block or slow down the conduction through the atrio-ventricular node can also be fatal. Four months after the ablation, the patient presented here has not had any recurrence.

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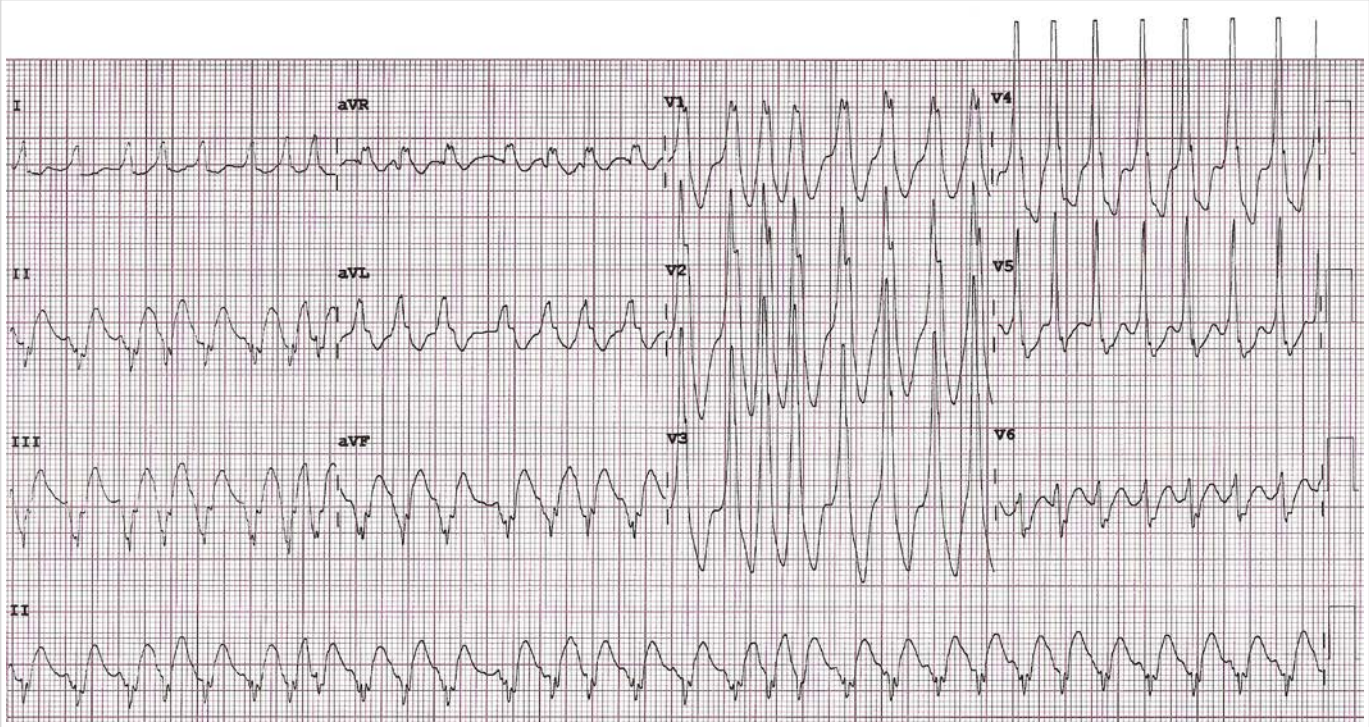

Figure 1.

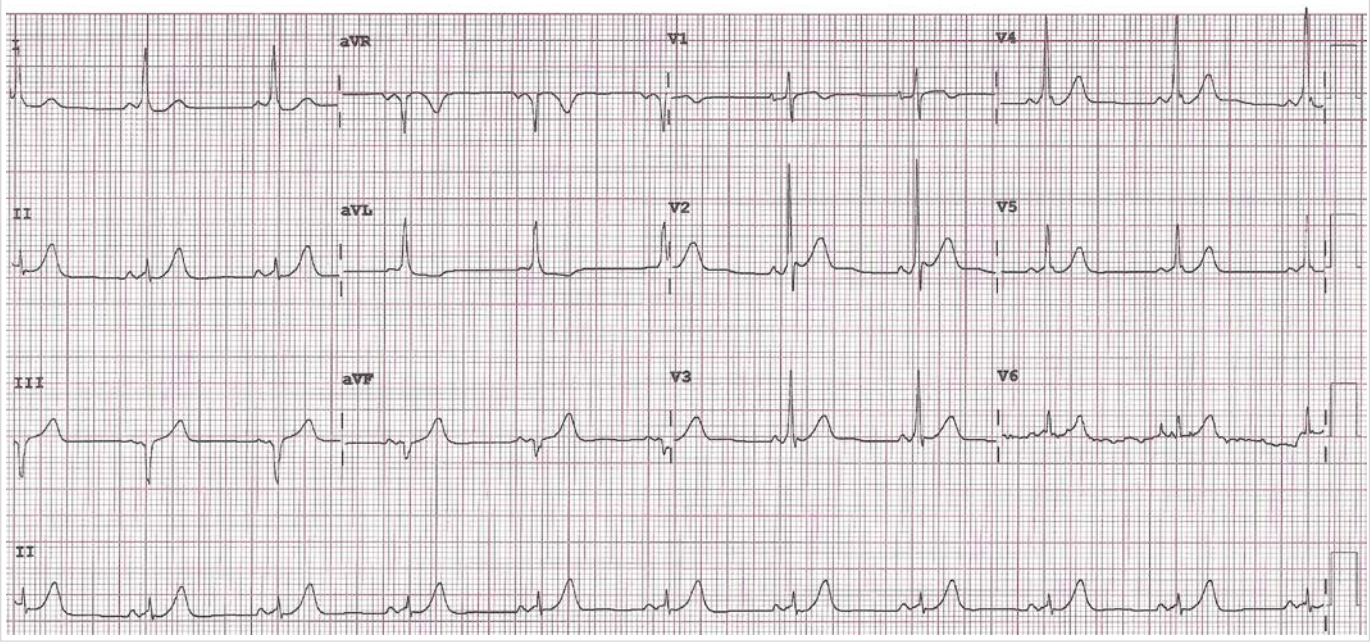

Figure 2.