

PP81 ATRIAL FIBRILLATION IN THE WOLFF-PARKINSON-WHITE SYNDROME: NEARLY A FATAL MISTAKE

MUHAMMAD KHIDIR¹, AHMAD ZULKARNAIN¹

¹EMERGENCY DEPARTMENT, UNIVERSITY MALAYA MEDICAL CENTRE

Introduction: Patients with Wolff-Parkinson-White syndrome (WPW) may develop paroxysmal atrial fibrillation, which is frequently overlooked by physicians in the Emergency Department (ED). Reversing this with manoeuvres and AV-nodal blocking agents may result in fatal arrhythmias.

Case description: A 27-year old gentleman with no underlying heart diseases, presented to the ED with palpitation, lightheadness, and chest discomfort. Upon arrival, he was alert and not in respiratory distress. Vital signs demonstrated blood pressure 108/75 mmHg, heart rate 220 beats/min, and saturation 98% under room air. Radial pulses were exceedingly rapid and fairly regular. Electrocardiogram (ECG) demonstrated an irregular, broad QRS complexes with varying morphologies, and rapid ventricular responses. This was initially misinterpreted as supraventricular tachycardia with aberrancy by the attending doctor. Attempts at carotid massage and Valsalva's manoeuvre were unsuccessful. The decision to administer intravenous Adenosine was nearly made, however the diagnosis was revised following senior consultation. A 120 Joule synchronised cardioversion was performed, and the rhythm was reverted to sinus. Narrow PR interval, Delta waves, and broad QRS complex which are indicative of WPW

syndrome, were revealed on repeated ECGs. Patient was admitted to the cardiology intensive care unit for close monitoring, and oral Flecainide was initiated. He was scheduled for an electrophysiological study and radiofrequency ablation.

Discussion: One relatively rare ECG that you must recognize- or you may be fooled into initiating wrong treatment, which can potentially be fatal. Vagal stimulation, induced by carotid sinus massage and Valsalva's manoeuvre causing atrial desynchronization, dispersion of atrial refractoriness, and intraatrial reentry. Several reports revealed orthodromic tachycardia in WPW patients reverted to atrial fibrillation after performing these manoeuvres. The effects of vagal stimulation on patients with atrial fibrillation in WPW is uncertain. AV-nodal blocking agents including Amiodarone, Adenosine, Beta Blockers, Calcium Channel Blockers, Digoxin are contraindicated in atrial fibrillation with WPW. The cornerstone management is intravenous procainamide and synchronized cardioversion is used for unstable patient. Radiofrequency ablation of the accessory pathway is another option to reduce the risk of life-threatening arrhythmias.

Conclusion: Physicians should be capable of distinguishing atrial fibrillation from supra- or ventricular tachycardia in WPW, as therapeutic options are crucial in preventing fatal arrhythmias.

Keywords: atrial fibrillation, Wolff-Parkinson-White syndrome, vagal stimulation, AV-nodal blocking agents