

# Sildenafil Induced Ventricular Tachycardia in A Healthy Man

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A 65 year-old previously healthy man with no cardiovascular risk factors such as smoking, hypertension, hyperlipidemia and diabetes, had admitted to our emergency department by paramedics via ambulance. There was no history of cardiopulmonary symptoms and no family history of heart disease or sudden death. Patient felt dizzy, had palpitation and chest pain. Electrocardiography showed ventricular tachycardia with a frequency of 234 bpm (Figure 1). Blood pressure was 105/60 mmHg. Patient stated that he has taken 200 mg Sildenafil before admission to the hospital and he was not taking any other drugs. He told that he used Sildenafil for the first time. After electrical cardioversion and converted to sinus rhythm, he immediately underwent coronary angiography and we saw only atherosclerotic plaques on left anterior descending coronary artery and right coronary artery. Blood tests were within normal range. His chest x-ray and echocardiography was unremarkable. We implanted prophylactic implantable cardioverter defibrillator (ICD) to the patient and suggested not to use Sildenafil citrate.

Sildenafil is the one of the most commonly used drugs over the world for erectile dysfunction treatment. In the past few years, a

growing number of studies have reported that this lethal arrhythmia led to sudden cardiac death in many middleaged men treated with sildenafil citrate<sup>1,2,3,4</sup>. Sildenafil citrate induces a dose-dependent block of the rapid component of the delayed rectifier potassium current is according to Geelen and colleagues. Same study reported that class III antiarrhythmic drugs and sildenafil citrate have similar actions<sup>5</sup>. Swissa and colleagues showed that mixed usage of nitric oxide and sildenafil citrate causes rised ventricular tachycardia / fibrillation vulnerability in righ ventricle of pig heart<sup>6</sup>. Despite the evidences which shows the arrhythmogenic effects of sildenafil citrate, some studies showed contradictory results. Kaya and colleagues reported that Sildenafil does not effect QT dynamic properties<sup>7</sup>. Vardi and colleagues found that Sildenafil does not increase rate of ventricular arrhythmias in man who has erectile dysfunction and cardiovascular disease<sup>8</sup>. Also Nagy and colleagues showed that sildenafil reduces arrhythmia severity during ischemia in dogs<sup>9</sup>. Our patient was admitted to our clinic with ventricular tachycardia even though he had no cardiac risk and he has taken Sildenafil for the first time in his life. In our opinion Sildenafil usage increased ventricular arrhythmia vulnerability and caused ventricular tachycardia.

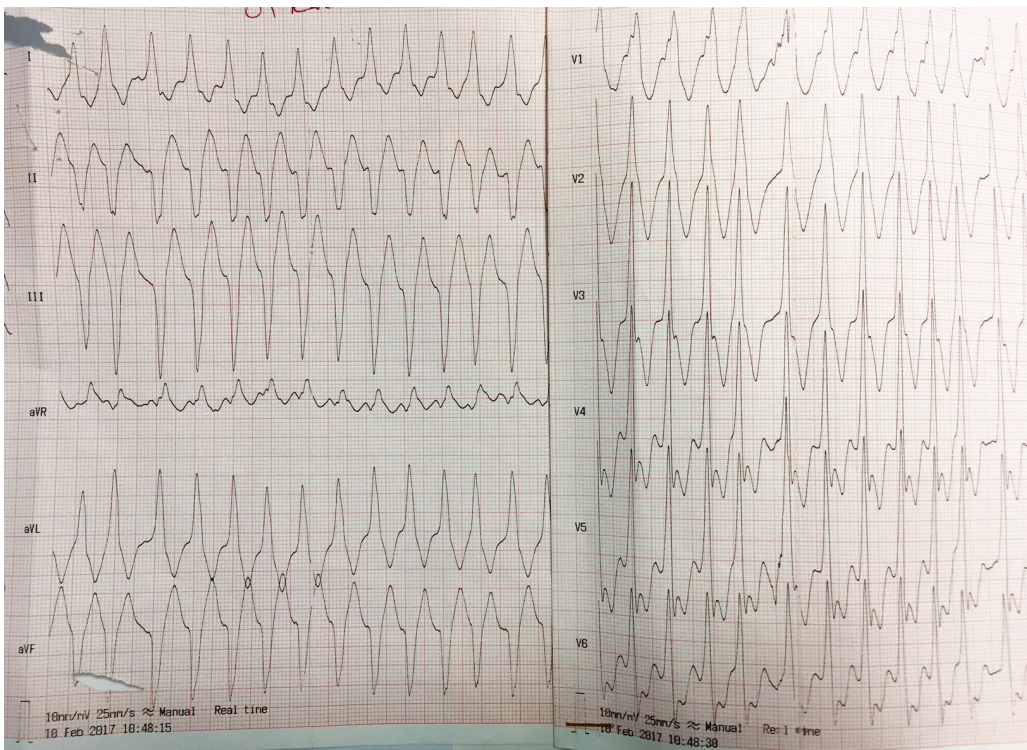


Figure 1: 12 Lead electrocardiography showed ventricular tachycardia



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