

## CASE REPORT 4 [ID#110]

### **Cannabis Oil Induced-Arrhythmia, Danger of a New Hit of Traditional Remedy in Thailand**

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**OBJECTIVE:** Smoking marijuana has been reported to be associated with cardiovascular complications including many types of arrhythmia. It is hypothesized to be the result of adrenergic stimulation which causes automaticity and micro-reentry. We report a case of non-prescribed cannabis oil induced-arrhythmia in no pre-existing cardiovascular disease patient.

**CASE REPORT:** A 49-year-old Thai female was recently diagnosed with an infected nasal cyst 9 days prior. She developed acute chest tightness, difficulty breathing and nausea 30 minutes after sublingually applied 2 drops of illegal cannabis oil in order to treat the cyst. Initially at the ED, she was agitated with heart rate of 160 beats/min. Other vital signs were unremarkable. 12 leads ECG showed atrial fibrillation, rate 150 beats/ min with ST segment depression at inferolateral leads. She was primarily diagnosed with acute NSTEMI for which she received aspirin, clopidogrel and isosorbide dinitrate. She noted that all the symptoms resolved half an hour later. High-Sensitivity Troponin T result (hs-cTnT) was negative. She was hospitalized for cardiac monitoring and laboratory workup. All investigation results were unremarkable including repeated hs-cTnT at six hours. However, slow rate atrial fibrillation with occasional PVC was persistently observed in the ECG monitoring for another 24 hours. An echocardiogram was done with non-significant result excepted for the slight decrease in left ventricular ejection fraction (LVEF) of 54% with LV concentric remodeling. Coronary computer tomography angiography was also normal with zero CAD-RADS score. The cannabis oil obtained from the patient was analyzed by GC-MS method and showed THC level of 57.04 ng/mL. On the third day of admission, patient completely recovered with spontaneous resolution of ECG to normal sinus rhythm.

**CONCLUSION:** Sublingual application of non-prescribed cannabis oil without certain type and exact amount of active substances known can cause serious toxicity even in a low risk user.