

Acute myocardial infarction on RCA in young patient without atherosclerosis risk factor

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ST-segment elevation myocardial infarction (STEMI) in young patient is very rare. Cases of STEMI in young patients with familial hypercholesterolemia or anatomical problem such as anomalous origin of the left coronary artery or coronary aneurysm from Kawasaki disease have been reported. But there are few case of STEMI in young patient who did not have any atherosclerotic risk factor. We report a case of 17-year-old male who developed STEMI on middle right coronary artery (mRCA), who did not have risk factor of acute coronary syndrome (ACS). A 17-year old male presented to the Emergency Department (ED) with sudden onset of left chest pain which occurred 30 minutes before admission. The patient was a non-smoker and did not abuse alcohol. He had neither diabetes mellitus nor hypertension. None of his family member had any history of acute coronary disease. Initial EKG taken at ED revealed ST elevation in II, III, aVF lead with reciprocal ST depression on precordial leads. After administration of sublingual nitroglycerin, his chest pain subsided. Initial laboratory data showed nonspecific findings including CK-MB of 0.21ng/mL and troponin-I of 0.021ng/mL. Echocardiogram showed left ventricle with ejection fraction of 55%, and slightly decreased wall motion on basal to mid inferior wall. We started treatment with loading dose of Aspirin, Ticagrelor and intravenous heparin. Coronary angiography (CAG) revealed complete occlusion of the mRCA with TIMI flow 0, and collateral flow coming from Left anterior descending artery. Flow in mRCA was restored with balloon angioplasty and thrombus aspiration. Drug eluting stent was deployed in mRCA. The patient was treated with intravenous abciximab and heparin additionally during PCI. An echocardiogram done at the 3rd hospital day showed good systolic function, with no regional wall motion abnormality. The valves were normal. His subsequent hospital course was uneventful. He made a full recovery and was discharged home at 5th hospital day. This report is one of the youngest case of STEMI in Korea. Even in young patient without risk factor of ACS who present with chest pain and ST elevation on EKG, evaluation with CAG should be done promptly to diagnose and to treat STEMI.

Association of high ventricular premature complex burden and stroke symptoms without prior stroke

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**Introduction:** Ventricular premature complexes (VPCs) detected from long-term ECG recordings have been associated with an increased risk of ischemic stroke. However, there was limited data about the association between high VPCs burdens and stroke symptoms without prior stroke. **Methods:** The Kosin University 24-hours holter monitoring, echocardiography, ECG database were reviewed from 2013 to 2015 to identify patients (pts) with frequent VPC (>20%). We compared the long-term clinical outcomes between the pts with frequent VPCs (>20%) and control group without VPC. **Results:** Among 304 pts who underwent 24-hours holter monitoring, 122 (40.1%) pts had high VPCs burdens (>20%). There was no difference of the incidence of total any events including bleeding events, thromboembolic events, arrhythmic events, re-hospitalizations and mortality in both groups ( $p = 0.812$ ). However, stroke symptoms including painless weakness, numbness, loss of vision, or inability to speak or understand occurred in 62 pts, with a significantly higher incidence in pts with high VPCs burdens (>20%) than the control group ( $p < 0.001$ ). In univariate analysis, age, diabetes mellitus and high VPCs burdens (>20%) were significantly associated with stroke symptoms. In multivariate analysis, age ( $p = 0.02$ ) and high VPCs burdens ( $p < 0.001$ ) were independent risk factors for stroke symptoms at the long-term follow-up. **Conclusions:** High VPCs burdens (>20%) were associated with and stroke symptoms without a prior stroke in the long-term follow up, suggesting more intensive medical follow-up will be required.

