**CAFFEINE INDUCED MYOCARDIAL INFARCTION**

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**Objectives:** To increase awareness about cardiac complications of caffeine overdose.

**Background**: A rapid and accurate diagnosis of acute ST-segment elevation myocardial infarction (STEMI) is of crucial importance as early initiation of primary percutaneous coronary intervention (PCI) is beneficial to patients. Caffeine has seldom been implicated as a cause of STEMI. We present a patient who came in with caffeine toxicity and found to have mildly elevated cardiac biomarkers and features suggestive of ischemic changes on ECG.

**Case Report**: 42-year-old male who presented with diffuse 5/10 throbbing chest discomfort, palpitations, restlessness, muscle twitch, diuresis, nausea and vomiting after ingesting 25 tabs of 200mg caffeine tablets. Vitals as well as physical examination were within normal limit. ECG revealed ST-elevation in the anteroseptal leads, and reciprocal changes in the inferior leads with T-wave inversion in the inferolateral leads. Cardiac biomarkers were mildly elevated. Patient’s caffeine level was 3 times upper limit of normal. ECHO revealed mild concentric left ventricular hypertrophy and normal left ventricular function. Cardiac Cath revealed patent coronary vasculature except the right coronary artery which showed endothelial dysfunction and was relieved with intracoronary nitroglycerin use. His symptoms resolved and he signed against medical advice.

**Discussion:** Instances of myocardial injury with necrosis, where a condition other than CAD contributes to an imbalance between myocardial oxygen supply and/or demand, the term ‘MI type 2’ is employed. Caffeine increases intracellular calcium, competitively inhibit of phosphodiesterase, producing an accumulation of cAMP and vasodilation. Its cardiovascular effect is contradictory and depends on dose of caffeine and development of tolerance with overdose causing increase in cardiac work and myocardial oxygen demand time of consumption.

**Conclusions**: Caffeine consumption has increased remarkably especially among adolescents who take high caffeine energy drink. A good knowledge and high index of suspicion of could prove to be lifesaving for patients with ST elevation ECG changes.