ACUTE CORONARY SYNDROME PRESENTED WITH VENTRICULAR FIBRILLATION: HOW AGGRESSIVE EMERGENCY PCI SHOULD BE DONE? (Case Report)

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Introduction: Underlying causes of cardiac arrest are Acute Coronary Syndrome (ACS) 67%, cardiomyopathy 13%, valvular heart disease 10%, and others 10% (Deshpande S, et al). 30-day mortality with resuscitated arrest in STEMI 40-50%. This case report aims to show how important emergency Percutaneous Intervention (PCI) in such manner.

Methods: A 47-year old female presented with cardiac arrest. One hour prior of the arrest, the patient experienced a chest pain. ECG monitoring showed ventricular fibrillation (VF). Defibrillation was done three times and CPR was done for 15 minutes, then ROSC. The patient denied any prior illness and no family history of cardiac disease. Vital signs BP 101/72 mmHg, HR 98 bpm, R 21 x/min. The patient underwent a emergency PCI. CT angiography showed total occlusion on proximal LAD. Result of emergency PCI and stenting showed TIMI 3 flow and minimal stenosis residual on LAD. 6-day follow up no chest pain, stable hemodynamics, ECG was normal

Result: Emergency PCI is needed to decrease mechanical burden in ACS by increasing the supply of coronary vessels. By achieving this condition, the reentry impulse that may cause tachyarrhythmia can be prevented and lowering the mortality. In study by Strote, et al about evidence for early transfer of cardiac arrest patient to cath lab, there were 240 patients (61 patients admitted <6 hours: 44 were discharged alive; 179 patients admitted >6 hours: 87 were discharged alive, p-value 0,001). LOS of <6 hours group was 9,1±6 days, >6 hours group was 9,8±21,7 days. Mean 1-year survival rate in cardiac arrest patient underwent emergency PCI is 90,6% and 5-year survival rate is 76,5% (Dumas F, et al).

Conclusion: There is no guideline about how aggressive emergency PCI in cardiac arrest should be done, but several studies show that the faster it is done after ROSC, the better the outcome.