

Outcome of ACS Patients Complicated by VT or VF from the ACSIS Cohort

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Background: Most of the data regarding the occurrence of VT/VF among patients hospitalized with acute myocardial infarction (AMI) and associated prognosis were obtained before the reperfusion era, whereas data on VT/VF in the era of primary percutaneous coronary intervention (PCI) are limited and conflicting regarding early and late prognosis.

Aim: To evaluate the incidence and outcome of patients with AMI presenting with early and late VT/VF.

Methods and results: We studied 7669 patients from the Acute Coronary Syndrome Israeli Survey (AC SIS) between the years 2002-2010 which included ST elevation (n=3573) and non ST elevation MI-ACS (n=4096). We divided them into 3 groups: patients with no VT/VF, early (<48h) VT/VF and late (>48h) VT/VF. Of the 7669 patients with ACS, 7369 (96%) had no VT/VF, 166 (2.1%) had early VT/VF and 134(1.7%) had late VT/VF. Baseline characteristics were significantly different among the 3 groups; with higher number of coronary risk factors and co-morbid conditions in the VT/VF groups and notably younger age (mean 60±12) in the early VT/VF group. Patients with late VT/VF had a more complex hospital course with higher frequency of mechanical and arrhythmic complications other than VT/VF, and longer hospital stay. Mortality data are given in the table:

	No VT/VF	Early VT/VF	Late VT/VF	P value
In hospital Mortality	271 (3.7%)	25 (15.1%)	38 (28.4%)	<0.001
30-Day Mortality	311 (4.2%)	25 (15.2%)	40 (29.9%)	<0.001
1-Year Mortality	531 (9.5%)	24 (20.3%)	41 (40.2%)	<0.001
MACE 30 Days	618 (8.3%)	31 (18.7%)	45 (33.6%)	<0.001

After adjustment for multiple confounders early VT/VF was shown to be associated with increased risk of in-hospital death (OR=2.8; CL 95% 1.3-5.9), but not with increased post discharge 30-day (HR=0.94; CI 95% 0.12-7.1) or 1-year mortality risk (HR=1.3; CI 95% 0.5-3.2). In contrast, late VT/VF was associated with increased 30-day mortality risk (HR=5.7; CI 95% 1.7-19.15) and a trend for increased 1-year mortality risk (HR=1.9 CI 95% 0.85-4.35)

Conclusions: In this study early VT/VF was associated with increased risk of in-hospital death but not with increased post discharge, whereas late VT/VF was associated with increased risk of 30-day death and a trend for increased 1-year mortality risk.