Outcome of Acute Coronary Syndrome Octogenarian Patients in Israel

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Background: While patients ≥ 80 years old constitute the fastest growing segment of the population and have a high prevalence of coronary artery disease (CAD), few data are available regarding the outcome of octogenarians with acute coronary syndrome (ACS).

Methods: We evaluated in-hospital and 30-day clinical oucome of 1,766 patients [241 (14%) ≥ and 1,525 (86%) < 80 years old] from the Acute Coronary Syndrome Israel Survey (ACSIS), by analyzing data from ACS patients hospitalized in all coronary care units in Israel during a two-month period in 2008.

Results: ACS patients ≥ 80 years (mean age 85±4) had higher incidence of CAD risk factors, prior cardio-cerebrovascular events, chronic renal failure and cardiac medication use compared to patients < 80 years (mean age 60±11). Time from chest pain onset to hospitalization and myocardial infarction (MI) location were similar in both groups. Killip class on admission was higher, while left ventricular ejection fraction was lower in ACS ≥ compared to < 80 years. ST elevation MI (STEMI) on admission was more common in ACS patients < than ≥ 80 years (45% vs 32%). Throughout hospitalization ACS patients ≥ 80 years received significantly less single and/or dual antiplatelet therapy, angiotensin-converting enzyme inhibitors, β-blockers and statins, but more calcium blockers, nitrates and diuretic therapy, compared to those < 80 years.

	Age < 80 (n=1525)	Age ≥ 80 (n=241)	P value
Any PCI during hospitalization	1096 (72%)	124 (51%)	<0.01
IIb/IIIa antagonist use during PCI	511 (47%)	36 (29%)	<0.01
In-hospital mortality	23 (1.5%)	21 (8.8%)	<0.01
In-hospital major bleeding	22 (1.4%)	6 (2.5%)	NS
30-day MACE	179 (12%)	66 (27%)	<0.01
30-day mortality	37 (2.5%)	35 (14.8%)	<0.01

The in-hospital and 30-day mortality rates were significantly lower in ACS patients ≥ 80 years who underwent any PCI during hospitalization compared with those who did not (4.8% vs 13% and 7.2% vs 22.8%, p<0.01) and the use of IIb/IIIa antagonist did not increase major bleeding and/or mortality. Seventy-seven patients ≥ 80 years had STEMI: 37 (48%) underwent primary PCI (14 patients with and 23 without IIb/IIIa), while 36 (47%) patients did not. No significant major bleeding was observed between the groups. In-hospital and 30-day mortality rates were significantly lower in patients ≥ 80 years who underwent, compared with those who did not undergo primary PCI.

Conclusion: Octogenarians ACS patients have significantly worse in-hospital and 30-day outcome compared to those < 80 years. However, the low incidence of procedural complications, together with good in-hospital and 30-day survival, suggest that PCI in ACS octogenarians is safe and effective.