Mortality is a more important end-point than stroke in patients with ACS. What can be done about it?

Andrew Nicolaides
Argyris Giannopoulos

17 Studies Involving 11,391 Patients with ACS > 50%

5-year weighted average cumulative all cause mortality was 23.6% (95% CI 20.50 to 26.80)

5 year average annual mortality 4.6% (All studies)

10 year average annual mortality 5.2% (7 studies)

Effect of CEA on mortality: None

5 year weighted cumulative all-cause mortality
After CEA: 22.70% (95% CI 22.96 to 23.59)
After Medical therapy alone: 24.35% (95% CI 21.65 to 27.21)

This mortality rate is 3 times higher than the mortality for the general population of the same age group (65-74) (UK data)

Effect of time

In the UK, for the same age group and period 1990-2010 all cause mortality has declined by 45% and CAD mortality by 30%

This is not the case for those with ACS

Proportion of Cardiac Deaths

The percentage of cardiac mortality (weighted average) in those who died was 62.8% (95% CI 58.8 to 66.9) (12 studies)

This translates into an average cardiac-related annual mortality of 2.9%

i.e. very high risk group
What can be done about it?

The 2013 ACC/AHA guidelines on lipid lowering therapy recommend that:
non-diabetic asymptomatic individuals with an LDL of 70-189 mg/dL should be treated aggressively with statins in addition to other risk factor modifications when the 10-year risk is > 7.5% (annual risk > 0.75%)

Stone NJ et al, Circulation 2014;63(25 Pt B):2889-934

Why?

This is because recent RCTs have shown a substantial reduction in both non-fatal cardiovascular events and total mortality
28% reduction in CAD non-fatal and fatal events
22% reduction in non-fatal and fatal stroke
17% reduction in overall mortality

Cholesterol treatment trialists collaboration. Lancet 2012;380:581-90
Taylor F et al, Cochrane Database of systematic reviews. 2011;CD004816

What is high intensity statin therapy?

Lowering LDL-C by ≥ 50% which is often achieved by
Atorvastatin 40-80 mg daily
or rosuvastatin of at least 20 mg daily

What else can improve survival after CEA?

Illuminati et al, EJVES 2015;49:366-74