

STREAM - ONE YEAR MORTALITY STRATEGIC REPERFUSION EARLY AFTER MYOCARDIAL INFARCTION

STREAM design



STEMI <3 hrs from onset symptoms, PPCI <60 min not possible, 2 mm ST-elevation in 2 leads



Primary endpoint: composite of all cause death or shock or CHF or reinfarction up to day 30

Armstrong et al NEJM 2013;368(15):1379-87

MEDIAN TIMES TO TREATMENT (min)





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BACKGROUND



In STREAM at 30 days, we explored the strategy of fibrinolysis with bolus tenecteplase given before transport to a PCI-capable hospital followed by timely coronary angiography in STEMI patients presenting within 3 hours and unable to undergo primary PCI within 1 hour. We observed this was associated with

- similar composite endpoint as primary PCI
- a small increased risk of intracranial bleeding
- a non-significant 1.5% absolute lower incidence of cardiogenic shock and congestive heart failure

Prior results from CAPTIM & WEST and FAST-MI suggest a beneficial long-term effect from pharmaco-invasive therapy

The objective of this presentation is to report the <u>1 year mortality</u> results in STREAM

CAPTIM – WEST combined (n = 1,168):



One year survival by time from symptom onset



Westerhout et al AHJ 2011;161:283-90

FAST-MI registry (n=1,492)

Five-year mortality according to reperfusion strategy





PRIMARY COMBINED ENDPOINT / STROKE





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One-year mortality rates



| % | Pharmaco-invasive (N=944) | PPCI (N=948) | P-value |
|----------------------------|------------------------------|-----------------|---------|
| 1 year follow-up available | 99.2% | 99.3% | |
| Death at 1 year | 6.7% | 5.9% | 0.52 |
| Cardiac death at 1 year | 4.0% | 4.1% | 0.93 |
| Death before 30d | 4.6% | 4.4% | 0.88 |
| Death between 30d & 1y | 2.1% | 1.5% | nc |

Causes of death between 30 days & 1 year



| | Pharmaco-invasive (N=944) | PPCI (N=948) |
|-----------------------|------------------------------|-----------------|
| Death | 20 (2.1%) | 14 (1.5%) |
| Cardiac | 7/20 | 7/14 |
| Stroke or ICH | 2/20 | 0/14 |
| Major (non-ICH) bleed | 0/20 | 1/14 |
| Other non-cardiac | 11/20 | 6/14 |

All-cause mortality





Cardiac mortality





Prespecified subgroups (all-cause death)



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All-cause mortality before & after amendment



Patients randomized after Am. (n=1,510)

Patients randomized before Am. (n=382)









Interaction P = 0.380



CONCLUSIONS



- All-cause and cardiac mortality at one-year were similar irrespective of the treatment strategy.
- After the amendment, mortality rates in both arms converged. While the amendment likely played a role, we cannot exclude the play of chance.

Taken together, these one-year results indicate that the pharmaco-invasive strategy used in STREAM was similar to primary PCI and offers an alternative reperfusion therapy strategy to a substantial proportion of patients worldwide.