# Are there differences on prognosis among patients with previous ischemic heart disease vs cerebrovascular disease admitted with acute coronary syndrome?

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## BACKGROUND

- It is known that patients with previous vascular disease (PVD) have a poorer outcome than those without these previous conditions, and prognosis worsens as the number of affected vascular beds increases.
- The importance of polyvascular disease resides in re ported evidence that atherosclerotic involvement of ≥ 1 vascular territories leads to underuse of medications with proven benefits and fewer coronary revascularization treatments, which has an adverse impact on the clinical course during hospitalization and at follow-up.

## AIM

- To evaluate if there are differences in **in-hospital** and **6-month** mortality among patients admitted with acute coronary syndromes with previous ischemic heart disease (IHD) versus cerebrovascular disease (CVD).

## METHODS

**4871 patients** (pts) admitted consecutively in our coronary care unit with a diagnosis of acute coronary syndrome from January 2002 to October 2013

Pts **with previous IHD plus CVD** (n=71, 1.5%) **were excluded**.

**GROUP 1**
Pts without previous vascular disease
(n=3718, 76.3%)

**GROUP 2**
Pts with previous Ischemic heart disease
(n=825, 16.9%)

**GROUP 3**
Pts with previous cerebrovascular disease
(n=257, 5.3%)

For each group we compared clinical and laboratory features and adverse events

**Primary endpoint** was **6-month mortality**. Follow-up was completed in **98%** of patients.

## RESULTS

**Baseline patients' characteristics on admission**

| | G1 | G2 | G3 | p |
|---|---|---|---|---|
| Age (years) | 63±13 | 67±12 | **71±11** | <0.001 |
| Women (%) | 25 | 21.9 | **32.3** | <0.001 |

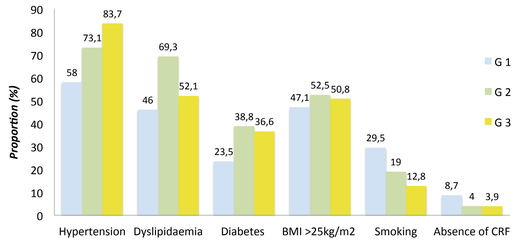


**Fig 1 – Proportion of cardiovascular risk factors by groups**

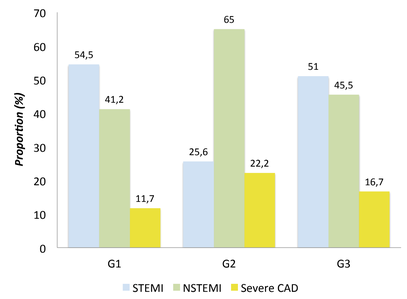


**Fig 2 – Proportion of cardiovascular events by group.**

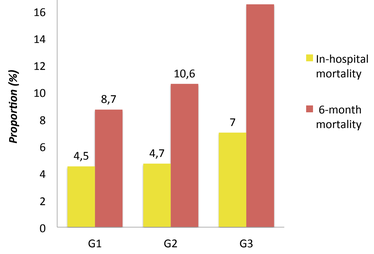


**Fig 3- Proportion of cardiovascular events by group.**

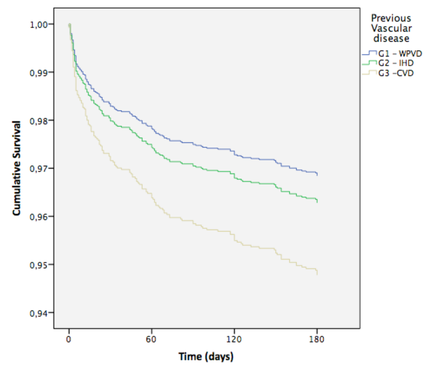


**Fig 4- Survival analysis, by kaplan-Meyer curves.**

**Table II – Clinical features at admission.**

| | G1 | G2 | G3 | p |
|---|---|---|---|---|
| Killip >1 (%) | 19.6 | 29.6 | **34.2** | <0.001 |
| Killip = 4 (%) | 2.0 | 1.0 | **4.3** | 0.009 |
| Anaemia (%) | 19.8 | 28.6 | **33.9** | <0.001 |
| Renal failure (%) eGFR <60 ml/ min | 19.2 | 31 | **40.9** | <0.001 |
| LVSD (%) | 56.2 | **61.8** | 58.4 | 0.03 |

**Table III – In hospital medical treatment and procedures.**

| | G1 | G2 | G3 | p |
|---|---|---|---|---|
| Aspirin | 99.4% | 99.1% | 100% | NS |
| Clopidogrel | 98.3% | 97.3% | 96% | NS |
| Beta-blockers | 86.1% | 86.1% | **74.7%** | **<0.001** |
| ACE-Inhibitors | 87% | 91.7% | **86.4%** | **0.001** |
| Statins | 94 % | 94.5% | 91.4% | NS |
| Inotropics | 7.1% | 6.3% | **12.6%** | **0.003** |
| LMWH | 76.5% | 89% | 82.9% | <0.001 |
| UFH | 32.3% | 17.7% | 23.7% | <0.001 |
| PCI | 51.2% | 32.2% | 38.2% | <0.001 |
| Thrombolysis | 19.9% | 14.3% | 18.3% | 0.001 |
| CABG | 10.3% | 14.4% | 8.9% | 0.001 |

**Table IV – Predictors of 6-month mortality, by cox regression.**

| Predictors of 6-month Mortality | | | |
|---|---|---|---|
| **VARIABLE** | **OR** | **95% IC** | **P** |
| Age | 1.07 | (1.05-1.09) | <0.001 |
| Renal insufficiency | 1.43 | (1.25-1.64) | <0.001 |
| KK > 1 | 2.50 | (1.80-3.47) | <0.001 |
| IHD vs WPVD | 1.19 | (0.81-1.73) | *NS* |
| **CVD vs WPVD** | **1.67** | (1.06-2.63) | **0.026** |

## CONCLUSION

- Patients with previous vascular disease had higher prevalence of risk factors.
- Presence of previous vascular disease was associated to higher in-hospital and 6-month mortality.
- History of IHD was associated with higher mortality during hospitalization and at follow-up, although it was not an independent predictive factor in the adjusted analysis.
- Patients with previous cerebrovascular disease were older, more women, had more comorbidities and were less prescribed beta-blockers and ACE-Inhibitors.
- Previous cerebrovascular disease remained as a strong predictor of 6-month mortality in patients admitted with acute coronary syndrome.

## LIMITATIONS OF STUDY

- Single Centre study.
- Drawbacks inherent to retrospective and observational studies, such as unadjusted bias.
- Based on a vast period of time, where many changes on treatment of ACS were observed.

**The authors have nothing to declare.**