Abstract: **P1088**

**Angiotensin-converting enzyme inhibitors in acute coronary syndrome with mid-range ejection fraction**

**Authors:**
F M Fonseca Goncalves¹, JP Guimaraes¹, SC Borges¹, JJ Monteiro¹, PS Mateus¹, JI Moreira¹, ¹Hospital Center of Tras-os-Montes and Alto Douro, Cardiology - Vila Real - Portugal,

**Topic(s):**
Acute Heart Failure: Pharmacotherapy

**Citation:**

Introduction: Classically included in the group of patients with 'preserved' left ventricular systolic function (LVEF), heart failure (HF) with mid-range ejection fraction (40-49%) is a group of patients with more recent individualization, whom approach and treatment in the context of ischemic heart disease are not yet fully established. The aim of this study was to evaluate the impact of angiotensin-converting enzyme inhibitors (ACEI) on acute coronary syndrome (ACS) with mid-range LVEF (MREF) and its comparison with patients with LVEF =50%.

Methods: This was a retrospective study of patients with nonfatal ACS, periodically included in our center registry between October/2010 and November/2017, who were evaluated for LVEF during the index event. Patients were subdivided into 2 groups - group 1 with MREF and group 2 with LVEF =50%. The primary endpoints evaluated were cardiovascular mortality (CV) and MACE (myocardial infarction, coronary revascularization and CV death), at a median follow-up of 42 months (IQR 27-59).

Results: A total of 394 patients were identified, 28,9% belonging to group 1 and 71,1% to group 2. The prescription of ACEI at discharge was 90,4% in group 1 and 90% in group 2.

Cardiovascular mortality was significantly higher in group 1 (11,4% vs. 3,6%, p<0,05). In addition, there was a trend for more MACE in this group (17,5% vs. 11,4%, p=0,104).

In a multivariate analysis adjusted for age and ACS type, the use of ACEI in group 1 was associated with lower CV death (HR 0,2, 95% CI 0,1-0,8). There was also less MACE, but this difference did not reach statistical significance (HR 0,5, 95% CI 0,2-1,5). In group 2, no significant differences were found either for CV death (HR 0,9, 95% CI 0,2-4,5) or for MACE (HR 0,8, 95% CI 0,3-2,1), despite a tendency for fewer events.

Conclusions: In ACS, MREF appears to be associated with worse prognosis when compared with LVEF =50%. The prescription of ACEI was associated with a decrease in cardiovascular events in the MREF group, which did not occur significantly in the LVEF =50% group.
Abstract: Angiotensin-converting enzyme inhibitors in acute coronary syndrome with mid-range ejection fraction

Introduction: Classically included in the group of patients with 'preserved' left ventricular systolic function (LVEF), heart failure (HF) with mid-range ejection fraction (40-49%) is a group of patients with more recent individualization, whom approach and treatment in the context of ischemic heart disease are not yet fully established. The aim of this study was to evaluate the impact of angiotensin-converting enzyme inhibitors (ACEI) on acute coronary syndrome (ACS) with mid-range LVEF (MREF) and its comparison with patients with LVEF = 50%.

Methods: This was a retrospective study of patients with nonfatal ACS, periodically included in our center registry between October/2010 and November/2017, who were evaluated for LVEF during the index event. Patients were subdivided into 2 groups - group 1 with MREF and group 2 with LVEF = 50%. The primary endpoints evaluated were cardiovascular mortality (CV) and MACE (myocardial infarction, coronary revascularization and CV death), at a median follow-up of 42 months (IQR 27-59).

Results: A total of 394 patients were identified, 28.9% belonging to group 1 and 71.1% to group 2. The prescription of ACEI at discharge was 90.4% in group 1 and 90% in group 2.

Cardiovascular mortality was significantly higher in group 1 (11.4% vs. 3.6%, p<0.05). In addition, there was a trend for more MACE in this group (17.5% vs. 11.4%, p=0.104).

In a multivariate analysis adjusted for age and ACS type, the use of ACEI in group 1 was associated with lower CV death (HR 0.2, 95% CI 0.1-0.8). There was also less MACE, but this difference did not reach statistical significance (HR 0.5, 95% CI 0.2-1.5). In group 2, no significant differences were found either for CV death (HR 0.9, 95% CI 0.2-4.5) or for MACE (HR 0.8, 95% CI 0.3-2.1), despite a tendency for fewer events.

Conclusions: In ACS, MREF appears to be associated with worse prognosis when compared with LVEF = 50%. The prescription of ACEI was associated with a decrease in cardiovascular events in the MREF group, which did not occur significantly in the LVEF = 50% group.

Graph: The graph shows the cardiovascular mortality rate over the follow-up duration (months) for patients with LVEF ≥50% and mid-range LVEF. The p-value is 0.003.