Rev Port Cardiol. 2015;34(5):315–328

Revista Portuguesa de
Cardiologia
Portuguese Journal of Cardiology
www.revportcardiol.org

ORIGINAL ARTICLE

A conservative strategy in non-ST-segment elevation myocardial infarction – constraints and prognosis: The situation in Portugal☆

Davide Moreira*, **Bruno Marmelo, Anne Delgado, Luís Nunes, João Pipa, Oliveira Santos, on behalf of researchers from the National Registry of Acute Coronary Syndromes**

Serviço de Cardiologia, Centro Hospitalar Tondela-Viseu, Viseu, Portugal

Received 6 August 2014; accepted 25 October 2014
Available online 18 May 2015

KEYWORDS
Non-ST-elevation myocardial infarction;
Conservative strategy;
Prognosis

Abstract
Introduction and Objectives: The aim of this study was to assess the impact of a conservative strategy in non-ST-segment elevation myocardial infarction in patients in the Portuguese Registry of Acute Coronary Syndromes.
Methods: The 3780 patients included in the study over a three-year period were divided into three groups: group 1, patients treated by a conservative strategy during hospitalization; group 2, patients who underwent coronary angiography without percutaneous coronary intervention (PCI); and group 3, patients who underwent PCI. Clinical and procedural data and in-hospital complications were compared. The primary endpoint was defined as in-hospital or one-year mortality and the secondary endpoint as the presence of at least one of the following in-hospital complications: major bleeding according to the GUSTO criteria, need for blood transfusion, invasive ventilation, heart failure or reinfarction.
Results: Of the patients analyzed, 16.5% were treated by a conservative strategy. Patients in this group were older, more often women, and had more high-risk factors. A conservative strategy was associated with a higher rate of the primary endpoint – in-hospital mortality (10.6% vs. 1.1% vs. 0.6% in groups 1, 2 and 3, respectively, p<0.001, odds ratio (OR) 6.974, 95% confidence interval [CI]: 2.775–17.527) and one-year mortality (26.1% vs. 6.8% vs. 4.1%, p<0.001, hazard ratio (HR) 2.925, 95% CI: 1.433–5.974) – and of the secondary endpoint – 37.2% vs. 18.9% vs. 14.6%, p<0.001; OR 1.471 95% CI: 1.043–2.076.

☆ Please cite this article as: Moreira D, Marmelo B, Delgado A, et al. A decisão de não revascularizar o enfarte agudo do miocárdio sem supradesnivelamento de ST – condicionantes e prognóstico. A realidade nacional. Rev Port Cardiol. 2015;34:315–328.

* Corresponding author.
E-mail address: davidasmoreira@gmail.com (D. Moreira).

Conclusions: In this patient population, a conservative strategy is an independent predictor of in-hospital mortality, in-hospital complications and one-year mortality.

PALAVRAS-CHAVE
Enfarte agudo do miocárdio sem supradesnivelamento de ST;
Estratégia conservadora;
Prognóstico

A decisão de não revascularizar o enfarte agudo do miocárdio sem supradesnivelamento de ST – condicionantes e prognóstico. A realidade nacional

Resumo
Introdução e objetivo: Avaliar o impacto da estratégia conservadora no enfarte agudo do miocárdio sem supradesnivelamento de ST nos doentes do Registo Nacional de Síndromes Coronárias Agudas.
Métodos: Dos 3780 doentes incluídos no estudo durante um período de três anos, foram formados três grupos: no grupo 1 foram incluídos os submetidos a estratégia conservadora; no grupo 2 foram incluídos os doentes submetidos a coronariografia sem realização de intervenção coronária percutânea e no grupo 3 os que foram submetidos a intervenção coronária percutânea. Compararam-se as características clínicas e de procedimento e as complicações ocorridas no internamento. O *endpoint* primário foi definido pela mortalidade intra-hospitalar ou morte ao fim de um ano e o *endpoint* secundário foi definido pela ocorrência de pelo menos uma das seguintes complicações: hemorragia grave definida pelos critérios de GUSTO, necessidade de transfusão, ventilação invasiva, insuficiência cardíaca e reenfarte.
Resultados: Dos doentes analisados, 16,5% foram submetidos a estratégia conservadora; estes eram mais velhos, mais frequentemente mulheres e apresentavam mais fatores de alto risco. A estratégia conservadora associou-se a maior atingimento do *endpoint* primário – mortalidade intra-hospitalar (10,6% *versus* 1,1% *versus* 0,6%, p < 0,001, *odds-ratio* [OR] de 6,974, intervalo de confiança a 95% [IC95%]: 2.775-17.527), mortalidade ao ano (26,1% *versus* 6,8% *versus* 4,1%, p < 0,001, *hazard-ratio* (HR) 2.925, IC95%: 1.433-5.974) – e do *endpoint* secundário – 37,2% *versus* 18,9% *versus* 14,6%, p < 0,001; OR 1.471 IC95%: 1.043-2.076.
Conclusões: Neste conjunto de doentes, a estratégia conservadora é um preditor independente de mortalidade intra-hospitalar, complicações intra-hospitalares e da mortalidade ao ano.

Introduction

Revascularization in non-ST-segment elevation myocardial infarction (NSTEMI) relieves symptoms, reduces hospital stay and improves prognosis.[1–3] However, the indications for and timing of revascularization depend on various factors, some inherent to the patient (such as age, gender and comorbidities) and others external, including the availability of resources. Consequently, although an invasive approach combined with optimal medical therapy is associated with improved survival at all ages,[4] a non-invasive approach is more often adopted in older patients, in whom the presence of comorbidities is seen as a limitation to coronary angiography.[1,5] With regard to gender differences, various studies have shown that women undergo coronary angiography less often than men,[6] although the benefits are similar for both sexes.[7] Data from the Global Registry of Acute Coronary Events (GRACE), the largest multinational registry of patients with acute coronary syndrome (ACS), show an inverse relation between the likelihood of a patient undergoing percutaneous coronary intervention (PCI) and the patient's risk.[8] This demonstrates the complexity surrounding the factors that determine the best therapeutic approach to adopt; the decision whether to perform coronary angiography depends on available resources and the hospital protocols and, most importantly, individual clinical judgment.

The aim of this study was to assess the impact of a conservative strategy in NSTEMI during hospitalization and in the medium term.

Methods

A population of 3799 patients with NSTEMI was selected from the databases of the Portuguese Registry on Acute Coronary Syndromes (ProACS) and the Portuguese Society of Cardiology between 1 October 2010 and 1 October 2013. NSTEMI was defined as elevated cardiac biomarkers (troponin or the MB isoenzyme of creatine kinase [CK-MB]) with symptoms compatible with myocardial ischemia but without persistent ST-segment elevation (<30 min) on the admission