

Facts about handling acute myocardial infarction with elevation of the ST segment in Argentina

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Cardiovascular disease constitutes the major cause of death in our country, with about one third of all the cases in the latest references from the national statistics. The acute myocardial infarction is one of its most aggressive manifestations, and during its acute stage and due to its subsequent consequences, it contributes to a great extent of such mortality rate. Current projections based on epidemiologic studies estimate hospitalizations due to infarction are over 40,000 every year in our country, with an average age of 52 for the first infarction in different studies.

Over the last two decades, numerous contributions to its treatment have been incorporated, which allow for its morbimortality reduction. In its acute stage, pharmacological or mechanical reperfusion strategies significantly reduce morbimortality, and contribute to the recovery of coronary flow.

On the basis of a series of complementary information, we are able to estimate that a high number of patients eligible to be treated with reperfusion strategies do not have access to this treatment and the consequence is thousands of deaths that could be prevented. When treating an epidemic disease such as the infarction, the lack of truly effective and consensual measures in both national and international settings represents the unequal access for the population to diagnostic and therapeutic resources, a situation we should contribute to revert.

A Working Group made up of professionals from public as well as from private healthcare facilities, with vast experience in dealing with patients suffering from acute coronary syndromes and participating in scientific and academic societies, has called themselves with the aim of discussing the strategy to overcome this serious Public Health problem. This document summarizes this discussion and the proposals to be submitted to the authorities from different scientific societies related to this subject so that they are considered and discussed with the competent national and provincial health authorities.

PROBLEM DIAGNOSIS AND CONCEPTUAL LAYOUT

The acute myocardial infarction is a high-incidence disease in our country, and different estimates show that validated strategies are not properly applied to improve its morbimortality. Although all the scien-

tific societies agree upon systematic procedures and treatment, this is not translated into their correct application.

When treating the acute myocardial infarction, great progress in reducing morbimortality has been achieved, especially with the coronary reperfusion strategies applied during the first hours of its evolution: pharmacological thrombolysis and primary angioplasty. For the last 20 years, the Argentine scientific societies have periodically carried out surveys and gathered information about the increasing use of these strategies in intensive care unit networks with academic motivation. However, the epidemic projections and the analysis of the real implementation of thrombolytic agents and angioplasty presuppose that a high percentage of infarctions in the country are not treated with these reperfusion strategies. If these strategies were applied, thousands of deaths could be prevented. In that sense, we lack national statistics regarding the incidence of hospitalized patients with infarctions and their treatment outside these academic nets.

Scientific societies have designed systematic procedures and reached consensus about the infarction treatment that unanimously include those measures that are internationally considered to be the basics for that purpose nowadays. Nevertheless, the effective application of these measures, with high impact on people, has been restricted by multiple obstacles requiring suitable corrective strategies.

In this sense, the current proposal is for scientific societies and health authorities to start developing *active policies* to adopt a basic standard of infarction assistance in its different stages, to implement it through educative intervention to the whole community and to health professionals, to provide suitable resources in all the segments of the healthcare system and record tools, and to continuously assess the effectiveness of the action taken. In this way, we look to influencing the different actors of the diagnostic process and the infarction treatment and thus overcome the severe lack of quality of treatment.

The strategies to modify the present situation in the early treatment of infarction should be directed to the different assistance stages, from detecting the possible risk factors for the community in general to the comprehensive response from the healthcare sys-

tem and its administrative, technical, and professional sectors. In view of the heterogeneity of the healthcare system in different geographical areas and coverage systems, it is essential to draw up a series of measures to build up a quality standard for the infarction treatment, which can be assessed throughout their application, and improved according to their results.

Below is a brief list of some of the obstacles and the preliminary proposals to solve them within the adoption of *active policies*:

PROBLEM LAYOUT AND PROPOSED SOLUTIONS

- a) People are unaware that chest pains can be serious, even for young people. Awareness requires continuous educational campaigns in the media and at different educational levels about those problems that should require immediate consultation.
- b) Delays in getting adequate assistance, more than doubled consultations due to systems lacking proper technical resources for treatment, lack of interinstitutional coordination for referral to the best therapeutic option according to the region and the time schedule.

The following are examples of proposals, in an attempt to find solutions:

- Training for emergency system operators, so that consultations for chest pains suspicious of infarction involve the immediate referral of physicians with the necessary elements at their disposal (electrocardiograph, cardio-defibrillator, drugs). In case of a chest pain consultation or shock, the ambulance covering the emergency should have an electrocardiograph, and ideally a cardio-defibrillator.
- Improvement of the admission system in healthcare facilities so that patients undergoing chest pains are quickly treated in the emergency care unit and receive an early diagnosis.
- Training for primary care physicians and clinicians in the basics of chest pains, together with provision of equipment such as an electrocardiograph, and the possibility of making professional consultation in facilities that provide 24-hour assessment.
- Analysis of the possibilities for referrals/hospitalization at the first contact with a patient, particularly for the emergency ambulance systems, so that with a simple algorithm and an advice on the phone the first steps for diagnosis are followed and, as a consequence, it is decided which reperfusion treatment is the most suitable in each case and where it should be provided (ambulance, facility with only thrombolysis available, or center for coronary angioplasty).

Due to the diversity of geographical areas, complexity levels and coverage systems, all these propos-

als may be unified and applied through the design of an *early standard prehospital and intrahospital assistance prior to intensive care units*, in order to set clear guidelines for the quality of chest pain assistance, which would allow the emergency systems to put them into practice.

- c) Lack of reperfusion strategies, even for hospitalized patients or for those with a diagnosis of infarction. Lack of available resources. Set as a basic standard of infarction assistance that all patients with prolonged precordial pain and ST segment elevation should be applied reperfusion strategies, a measure that should be considered as the primary goal. Later on, it will be possible to evaluate if the quality of the treatment has been suitable in each facility, and to modify measures. In this sense, it seems essential not only to come to an agreement on basic issues among scientific societies, which already exists due to the validity of scientific tests on this field, but also that such agreement be applied in a simple system, and that the health authorities collaborate so that this system becomes a mandatory basic demand. In this sense, and although it has been regulated by law as a basic requirement for intensive care units, the lack of thrombolytic drugs for emergencies in many public and private low-complexity facilities treating patients with infarctions is a fact of great concern.
- d) Lack of national statistics over the incidence of acute myocardial infarction and its treatment. To us, this proposal constitutes a step forward towards a greater commitment of the medical community to apply the assistance and diagnostic measures that save the lives of thousands of patients in an epidemic pathology. To fulfill this commitment, it would be highly important that the different actors create an epidemic recording system suitable to quantify and assess the results of the adopted measures and their prospective modifications. Two basic proposals arise out of this:
 - Foster a record of the treatment for acute cardiovascular pathologies, shared by the different scientific societies, periodically or permanently.
 - Design a national survey about the regional incidence of the cardiovascular disease in emergencies and then hospitalized, as well as its treatment; this survey should be promoted by health authorities in a similar way as the National Survey of Risk Factors.

THE JOB OF THE SCIENTIFIC SOCIETIES

The Working Group considers that this project should be deeply discussed by the scientific society through an intersocietal project that allows for the continuity of the program, the design of prospective assessment mechanisms for the adopted measures, and the possible redefinition of strategies. This project would al-

low health authorities to get advice when dealing with this problem and its serious consequences for the population.

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