Original article

Stent for Life initiative in Portugal

Introduction

The Stent for Life Initiative (www.stentforlife.com) is a European project launched by the European Association of Percutaneous Cardiovascular Interventions (EAPCI) of the European Society of Cardiology, and implemented in Portugal by the Portuguese Association of Cardiovascular Intervention (APIC). This initiative aims to ensure that patients with ST-elevation myocardial infarction (STEMI) have access to appropriate treatment (primary percutaneous coronary intervention [p-PCI]), reducing regional disparities and improving the prognosis of these patients.

p-PCI is a specialized procedure that can only be carried out in hospitals with specialists in interventional cardiology and must be performed within two hours of the onset of symptoms. In Portugal in 2011, despite a fairly well-established primary angioplasty network, there were two issues:

1. The number of p-PCIs at the start of the Stent for Life initiative was well below that in northern European countries (less than 300 p-PCIs per million population);

2. Only 19% of STEMI patients received p-PCI; 44% of patients were treated by fibrinolysis and 37% received no reperfusion.

The main reasons for the low number of p-PCIs in Portugal are late or inadequate activation of emergency services by the population and delays in managing the disease within the health service as a whole.

Patient delay and system delays

The initial phase of Stent for Life in Portugal consisted of a thorough diagnosis, to portray and quantify the national situation in order to identify existing barriers. It also sought to identify partnerships and synergies between the different actors involved in the patient’s journey from symptom onset to completion of treatment in the catheterization laboratory.

With respect to the patient, two studies showed that only 33% of myocardial infarction (MI) patients dialed the European emergency number (112) to request medical help and only 24% of the population correctly identified MI symptoms; the others confused the symptoms with other diseases and 21% did not even know what they were.

Regarding system delays, 67% of patients in 2011 were driven to hospitals without interventional cardiology facilities, and the average transport time to treatment in a
hospital with p-PCI facilities was more than two hours.

On the basis of this initial diagnosis three focus areas were established: raising patient awareness of MI symptoms; reducing pre-hospital transport time; and improving collaboration between hospitals. A series of programmes and initiatives were then designed (Figure 1).

“Act now. Save a life”

It was clearly essential to raise awareness of the symptoms of MI and of the need to act quickly, by calling the European emergency number (112). A public awareness campaign, “Act now. Save a life”, was accordingly launched.

The key messages have focused primarily on the description of symptoms (chest pain associated with sweating and nausea...
may be symptoms of myocardial infarction), and the need for immediate action by calling 112, so that the patient is referred by the National Institute for Medical Emergencies (INEM) to a hospital with facilities for performing p-PCI. The aims of this campaign are to increase the number of patients who dial 112 and to ensure that they do so quickly, without delaying the request for help, and not try to go to hospital by themselves.

The campaign has formed partnerships with various businesses, including the pharmaceuticals, medical devices, telecommunications and energy industries, a supermarket chain, cinemas, the Order of Pharmacists and some municipalities. Since December 2011, various activities have been implemented, such as the distribution of posters and educational brochures in health centers, hospitals and schools; videos designed to increase awareness in cinemas and pharmacies and on the internet; and a Facebook page dedicated to the campaign with messages and information on cardiovascular screening and actions to raise awareness of MI in places such as shopping centers, businesses, service areas and Parliament. These actions have given the “Act now. Save a life” campaign coverage in the media (press, television and radio). Various public figures have agreed to be ambassadors for the project, including Rui Nabeiro, José Carlos Malato, Mafalda Arnauth, Rita Blanco, Miguel Guilherme, Isabel Angelino and Claudio Ramos.

**Figure 2**

Key messages of the “Act now. Save a life” campaign
Partnership with INEM

The involvement of INEM as a partner was crucial to reduce pre-hospital transportation delay. Rapid and direct access to hospitals with interventional cardiology centers able to perform p-PCI depends on appropriate technology implemented in 2012 to improve communication between telemetry and a doctor or nurse who monitors the patient during transport, while INEM contacts a cath lab by telephone to prepare for the patient’s arrival, so the patient does not need to pass through the ED.

Training sessions on the management of MI, called STEMINEM Days, have been held for INEM staff and hospital emergency teams.

Involving local hospital referral networks

To help optimize MI referral networks, a series of meetings, known as Stent Network Meetings, have been held at regional level including all actors involved in MI management in the respective region (representatives of primary health care, INEM, and hospitals with and without...

Four years later all p-PCI centers are working 24 hours a day, seven days a week, and more than 80% of STEMI patients undergo p-PCI within 12 hours
p-PCI). The meetings begin with a plenary session on the initial management of acute coronary syndromes pre-hospital and in the ED, followed by interdisciplinary workshops examining local barriers and solutions, planning actions and assigning tasks.

**Post-myocardial infarction**

A cooperation protocol was recently signed between APIC/Stent for Life and the Working Group on Cardiac Rehabilitation and Exercise Physiology (GEFERC). One of the first initiatives of this partnership, still in development, is Rehab for Life, an educational program for patients post-MI. Considering that these patients’ hospital stay is increasingly shorter, we must ensure that all patients receive adequate educational information to guide their new phase of life after the clinical episode.

**Conclusions**

After four years, there have been many advances. All p-PCI centers are working 24/7, more than 80% of STEMI patients undergo p-PCI within 12 hours, 37% of patients dial 112, and less than half of
patients with MI go to hospitals without interventional cardiology.

There is, however, still a long way to go to achieve the goal of the Stent for Life initiative: to enable all patients with MI to have timely access to p-PCI, regardless of region or location. Portugal is currently at a similar level to other European countries regarding the number of p-PCIs (335 per million population) (Directorate-General of Health, 2014), but regional differences still exist and we must continue to seek to work in partnership with the various stakeholders involved in the patient’s journey.

In other words, the whole (with all working together) is always more than the sum of its parts!