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EDITORIAL COMMENT

The Algarve Project: Closest to achieving the aims of the Stent For Life initiative in Portugal[☆]

Projeto Algarve: a região mais próxima dos objetivos da iniciativa *Stent for Life*

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Several randomized clinical trials[1–5] and meta-analyses[6] have shown that primary percutaneous coronary intervention (PPCI) is superior to fibrinolysis in reducing mortality, reinfarction and stroke following myocardial infarction (MI). The success rate of mechanical reperfusion is over 90%, much higher than fibrinolysis (around 50%). In countries or regions where fibrinolysis has been replaced by PPCI, mortality after MI has decreased sharply.[7]

This does not mean that there is no longer any role for fibrinolysis, particularly in remote areas where PPCI is not readily available. A pooled analysis of the CAPTIM and WEST trials showed that patients treated by pre-hospital fibrinolysis in the first two hours after symptom onset may in fact have significantly lower mortality than those with PPCI.[8]

The European Society of Cardiology (ESC) guidelines on myocardial revascularization state that PPCI is recommended not only for patients admitted directly to a hospital with interventional cardiology facilities but also for those who can be transferred to one within two hours.[9] When fibrinolysis has been used first but was unsuccessful, rescue angioplasty is also indicated. Even when fibrinolysis is successful, there is indication for coronary angiography, and possibly angioplasty, within 24 hours (pharmaco-mechanical reperfusion). It is important to note that the good results obtained with PPCI are dependent on the experience of the team[10]: it is recommended that a PPCI center should perform over 400 interventions a year, of which 36 should be primary angioplasties, and that each operator should perform a minimum of 11 PPCIs per year.

The main limitations of PPCI are logistical, resulting from difficulties in performing the intervention within the necessary time frame.[11] What is important in a complex situation such as MI, in which delays in treatment can have such a negative effect, is to have an organizational structure that is designed to minimize such problems. In general, there are two main sources of treatment delays: those related to the patient, and those related to the health system (pre-hospital and in-hospital).

The lack of awareness in the general population concerning the symptoms suggestive of MI and of what to do when they occur lead to significant delays in beginning appropriate treatment. The Portuguese Registry of Acute Coronary Syndromes[12] for the period 2002–2008 showed that 37.3% of patients underwent no reperfusion procedure and that in 55% of these the reason was arrival at the hospital more than 12 hours after symptom onset.