

The Heart Waits Less Than We Think: The Tragedy of Delayed Care for Acute Myocardial Infarction in Mexico



César Emiliano Jiménez Limón
SAEM
cesar4722@hotmail.com

It was 3:17 a.m. when a 56-year-old man arrived at the emergency department, diaphoretic, with his hand pressed tightly against his chest. “It was just stress... I thought it would pass,” he managed to say as the stretcher rolled toward the monitor. By that moment, his myocardial tissue had already been suffering for more than two hours. Two hours of coronary occlusion without reperfusion, two hours of electrical silence in tissue that could still have been saved. When the electrocardiogram revealed ST-segment elevation, we knew we were no longer competing against disease, but against time. And yet, even before deciding between fibrinolysis or transfer for angioplasty, we sensed that the system had already delayed us. The race had been lost before he crossed the door.

Mexico lives this scene every day. The true enemy is not only the coronary thrombus, but the accumulation of delays, structural barriers, and gaps in care that continue to cost lives that could be saved. Acute myocardial infarction (AMI) remains one of the leading causes of death in the country, and in-hospital mortality often doubles that reported in high-specialty international centers¹.

Much of this difference lies in the fact that most patients do not arrive on time, and when they do, they do not always receive immediate reperfusion.

National data show that more than 60% of patients arrive after the first two hours from pain onset; the median prehospital delay ranges between three and five hours, and only a minority access primary angioplasty within the recommended first ninety minutes^{2,3}. In Mexico, more than AMI, we face “delay-AMI”: infarctions defined not only by electrocardiographic findings, but by the cumulative delay from the first symptom to the first appropriate intervention.

The pathophysiology of infarction explains this urgency mercilessly. As soon as an unstable atherosclerotic plaque ruptures and triggers thrombosis, the supplied territory abruptly loses blood flow. In the first minutes, energy is obtained from anaerobic metabolism, lactate accumulates, and contractility is lost. After twenty to thirty minutes, areas of irreversible necrosis appear, and by two hours the infarcted area may become transmural². An infarction is like a blackout in a city: first one neighborhood goes dark, then another, until the entire zone is affected. Reperfusion—whether through fibrinolysis or angioplasty—is like restoring power before the circuits burn permanently.

This is why international guidelines insist on strict time windows: deciding fibrinolysis within thirty minutes, achieving door-to-balloon time under ninety minutes, and complete reperfusion within one hundred twenty minutes from first medical contact⁴. Every lost minute turns viable myocardium into scar tissue.

However, the gap between what is ideal and what is real in Mexico is wide. Not all hospitals have 24/7 access to catheterization laboratories; fibrinolytic agents are not always readily available; interhospital referral networks can prolong critical transfers; cardiovascular triage may fail; and training in rapid ECG interpretation varies widely among institutions. Added to this is patient-related delay, as chest pain is often interpreted as "gastritis," "gas," "fatigue," or "stress," leading individuals to wait, self-medicate, or consult acquaintances before seeking medical care. The result is a larger, more dangerous infarction.

The causes of this problem intertwine at three levels. At the health system level, the absence of clear reperfusion pathways, the unequal distribution of catheterization centers, and the lack of mandatory prehospital protocols are key determinants of delay. At the patient level, cardiovascular health literacy is insufficient, chest pain is normalized, and economic and geographic barriers limit timely access to care. In medical training, education in cardiovascular emergencies is heterogeneous, electrocardiogram mastery is inconsistent, and rapid decision-making is not yet trained systematically. It is not that we do not know how to treat infarction; it is that we do not treat it in time.

Even so, there are concrete, achievable, and sustainable solutions. A first step is the implementation of mandatory prehospital protocols in all ambulances—public and private—including obtaining an electrocardiogram within ten minutes, immediate transmission via telemedicine, and direct activation of the catheterization laboratory from the mobile unit.

In parallel, early fibrinolysis must be empowered in centers without timely access to angioplasty. Fibrinolysis is not a second-rate alternative; it is the correct option when angioplasty cannot be performed within the recommended time frames.

Mexico could greatly benefit from a significantly strengthened "Infarction Code," similar to those used for stroke and trauma care, with standardized protocols, measurable goals, and clear obligations at all levels of care. Widespread, homogeneous, and continuous training in electrocardiography, cardiovascular triage, and rapid decision-making is also essential. No physician should graduate without mastering these three pillars. On the community side, the implementation of simple, direct educational campaigns—such as "If chest pain does not go away in five minutes, call 911"—would have an immediate impact. In rural areas, telecardiology can make the difference between timely fibrinolysis and fatal delay, allowing an ECG sent from a community clinic to receive rapid validation by a cardiologist.

Acute myocardial infarction does not wait, does not negotiate, and does not offer second chances. Every minute without flow is a heartbeat lost forever. In Mexico, the battle against infarction remains a race against the clock, and too often we lose it before we begin. But it does not have to be this way. With clear protocols, timely decisions, and solid medical training, we can transform every minute gained into lives saved. In a scenario where time determines prognosis, perhaps the most human act we can offer as physicians is simply to arrive on time.