

Contemporary Trends in Treatment of STEMI

Abid Assali, Hana Vaknin-Assa, David Brosh, Tamir Bental, Igal Teplitsky, Eldad Rechavia, Eli Lev, Ran Kornowski
Cardiology, Rabin Medical Center, Petah-Tikva, and The Sackler Faculty of Medicine, Tel-Aviv University, Israel

Background:

The treatment of patients with STEMI has undergone dramatic changes over the past decade due to the results of large scale clinical trials which have shown the effectiveness of several modalities including short door to balloon time, radial approach, anti-platelet loading, aspiration thrombectomy and DES use.

Aim:

The objectives of this study were to describe contemporary, as well as changing, in the use of these modalities in STEMI patients from a large data base registry.

Method and Results:

We used our Database of all pts treated using primary PCI for STEMI. Patients were grouped into four periods: 2001-2005; 2006-2007; 2008-2009; 2010-2012. Excluded pts were those with cardiogenic shock.

| | 2001-2005 | 2006-2007 | 2008-2009 | 2010-2012 | P |
|----------------------|------------------|------------------|------------------|------------------|--------------|
| | N=770 | N=383 | N=366 | N=416 | Value |
| Age | 611±13 | 60±12 | 61±13 | 61±13 | 0.5 |
| Male | 78% | 85% | 81% | 84% | 0.05 |
| Anterior AMI | 48% | 47% | 49% | 40% | 0.01 |
| Door-Balloon [min] | 102±120 | 90±92 | 108±120 | 90±78 | 0.2 |
| Median [25-75%] | 60[60-120] | 60[60-120] | 60[60-120] | 60[36-120] | |
| Antiplatelet loading | 40% | 60% | 69% | 86% | 0.001 |
| Effient | | | | 33% | |
| Aspiration | 4.3% | 11.5% | 35% | 53% | 0.001 |
| DES use | 8.3% | 28% | 3.7% | 25% | 0.001 |
| 2B/3A Antagonist | 79% | 73% | 64% | 55% | 0.001 |
| Angiomax | 0.1% | 8.6% | 3.8% | 7.5% | |
| Radial approach | 3.5% | 14.4% | 11.7% | 37% | 0.001 |
| Successful PCI | 94% | 92% | 98% | 99% | 0.001 |
| <i>One year</i> | | | | | |
| Death | 7% | 6.3% | 4.1% | 3.1% | 0.1 |
| Re-MI | 8.6% | 3.7% | 3.9% | 2.2% | 0.001 |

| | | | | | |
|------------------|-------|-------|-------|-------|-------|
| Stent thrombosis | 3.9% | 1.8% | 1.4% | 1.2% | 0.003 |
| TVR | 15% | 8.4% | 12% | 7.5% | 0.01 |
| CABG | 5.7% | 4.7% | 3.3% | 1.7% | 0.08 |
| MACE | 23.5% | 17.8% | 16.7% | 11.5% | 0.009 |

Conclusion:

The present results suggest marked increases over time in the use of evidence-based therapies in patients hospitalized with STEMI. The improvement of clinical outcomes may be related to the implementations of these modalities.