ACC Latin America Conference 2017

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GLOBAL EXPERTS, LOCAL LEARNING
Decision making and timing in Reperfusion for Stemi

Alexandra Arias MD
Case presentation

• Men 55 years
• History –
  • DM2 3 years treatment with metformin 850 mg, good control
  • Hiperlypidimea without treament 1 year
  • Smoking – 4 years – 10 cigarrets a day
Case presentation

• Presented at the ER with progressive, stabbing chest pain that began 2.5 hours prior
Case presentation

BP 123/75   HR 93   RR 12

No rales, no murmurs, no extra sounds

Normal physical exam
Anterior STEMI – 2hs, Killip Kimball 1
The hospital is non PCI hospital
Transfer for PCI hospital > 60 min
Case presentation

Treatment

Asprin
Clopidogrel

Reperfusion – Which is the best for this patient?
What if the hospitals do not have P-PCI readily available?
Indications for Fibrinolytic Therapy When There Is a >120-Minute Delay From FMC to Primary PCI

<table>
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<tr>
<th>Indication</th>
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<tr>
<td>Ischemic symptoms &lt; 12 h</td>
<td>I</td>
<td>A</td>
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<td>Evidence of ongoing ischemia 12 to 24 h after symptom onset and a large area of myocardium at risk or hemodynamic instability</td>
<td>IIa</td>
<td>C</td>
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<td>ST depression, except if true posterior (inferobasal) MI is suspected or when associated with ST elevation in lead aVR</td>
<td>III: Harm</td>
<td>B</td>
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Thrombolytic Therapy: Importance of Early Therapy

Benefit Greatest within Two hours of therapy

Survival Benefit falls by 1.6 lives per 1000 patients per hour of treatment delay after two hours

BOERSMA, E. et al Early thrombolytic in acute myocardial treatment infarction : reappraisal of the golden hour - Lancet 1996 ; 771 - 775
Time from Symptom Onset to Treatment Predicts 1-year Mortality after Primary PCI

The relative risk of 1-year mortality increases by 7.5% for each 30-minutes delay

A delay in undergoing primary PCI reduces the benefits of the invasive approach

Case presentation

Treatment
Asprin
Clopidogrel
Tenecteplase
New ECG in 60 min - > 50% ST resolution
Case presentation

ECG after TNK
Case presentation

Transfer to PCI hospital 12 hours later
Angiography  LAD  lesion 80%
Echocardiogram  EF 55%, anterior hipocinesia
Case presentation

Anterior STEMI
Aborted myocardial infarction in ST-elevation myocardial infarction: insights from the STrategic Reperfusion Early After Myocardial infarction trial

Pharmacoinvasive strategy
Fibrinolysis + early PCI 6-24hs

AbMI was defined as ST-elevation resolution $\geq$50% (90 min Post tenecteplase (TNK) in the PI arm or 30 min post primary PCI) with minimal biomarker rise.

Neda Dianati Maleki et al. Heart 2014;100:1543-1549
Mortality  FMC-to-PCI delays in the overall patient cohort (Kaplan-Meier).

Koul S et al. J Am Heart Assoc 2014;3:e000486
Association between FMC-to-PCI delay and severe heart failure at discharge (error bars denote mean with standard error of the mean).

Sasha Koul et al. J Am Heart Assoc 2014;3:e000486
Conclusion

• Pharmaco-invasive t(hrombolysis + angioplasty) approach is a safe and effective to improve reperfusion rates and decrease mortality/morbidity for STEMI patients

• It is the best option in regions or hospital without PCI