PCI STRATEGY FOR STEMI AND CARDIOGENIC SHOCK

AHMED MAGDY MOUSTAFA, MD

KOBRY EL KOBBA MILITARY HOSPITAL
LECTURER OF CARDIOLOGY
MILITARY MEDICAL ACADEMY

HISTORY

• 65 YEARS OLD MALE
• HYPERTENSIVE FOR 10 YEARS
• IDDM FOR 15 YEARS
• SMOKER FOR THE PAST 30 YEARS
• PH OF PCI 2012
• HE WAS PRESENTED TO THE ER BY RETROSTERNAL AGONIZING CHEST PAIN FOR 1 HOUR.
• BP: 80/50
• HEART: S1, S2, S3 GALLOP
• CHEST: BILATERAL FINE BASAL CREPITATIONS

ECG
ECHO

• DILATED LV 6.7CM
• EF 35%
• MILD MR,
• GLOBAL HYPOKINESIA
• NO EVIDENCE OF MECHANICAL COMPLICATIONS.

SO, THE PATIENT WAS PREMEDICATED BY:

• IV MORPHIA
• O2
• ASA (300MG)
• TICAGRELOR (180 MG)
• UFH
• +VE INOTROPIC SUPPORT
• 20MG FRUSEMIDE
### Antiplatelet therapy

A potent P2Y$_{12}$ inhibitor (prasugrel or ticagrelor), or clopidogrel if these are not available or are contraindicated, is recommended before (or at latest at the time of) PCI and maintained for 12 months, unless there are contraindications such as excessive risk of bleeding.\textsuperscript{186,187}

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>A</th>
</tr>
</thead>
</table>

Aspirin (oral or i.v. if unable to swallow) is recommended as soon as possible for all patients without contraindications.\textsuperscript{213,214}

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>B</th>
</tr>
</thead>
</table>

GP IIb/IIIa inhibitors should be considered for bailout if there is evidence of no-reflow or a thrombotic complication.

<table>
<thead>
<tr>
<th></th>
<th>IIa</th>
<th>C</th>
</tr>
</thead>
</table>

Cangrelor may be considered in patients who have not received P2Y$_{12}$ receptor inhibitors.\textsuperscript{192–194}

<table>
<thead>
<tr>
<th></th>
<th>IIb</th>
<th>A</th>
</tr>
</thead>
</table>

### Anticoagulant therapy

Anticoagulation is recommended for all patients in addition to antiplatelet therapy during primary PCI.

<table>
<thead>
<tr>
<th></th>
<th>i</th>
<th>C</th>
</tr>
</thead>
</table>

Routine use of UFH is recommended.

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>C</th>
</tr>
</thead>
</table>

In patients with heparin-induced thrombocytopenia, bivalirudin is recommended as the anticoagulant agent during primary PCI.

<table>
<thead>
<tr>
<th></th>
<th>IIa</th>
<th>A</th>
</tr>
</thead>
</table>

Routine use of enoxaparin i.v. should be considered.\textsuperscript{200–203}

<table>
<thead>
<tr>
<th></th>
<th>IIa</th>
<th>A</th>
</tr>
</thead>
</table>

Routine use of bivalirudin should be considered.\textsuperscript{209,215}

<table>
<thead>
<tr>
<th></th>
<th>IIa</th>
<th>A</th>
</tr>
</thead>
</table>

Fondaparinux is not recommended for primary PCI.\textsuperscript{199}

<table>
<thead>
<tr>
<th></th>
<th>III</th>
<th>B</th>
</tr>
</thead>
</table>

Inotropic/vasopressor agents may be considered for haemodynamic stabilization.

<table>
<thead>
<tr>
<th></th>
<th>IIb</th>
<th>C</th>
</tr>
</thead>
</table>
IMMEDIATE TRANSFER TO THE CATH LAB

Recommendations for the management of cardiogenic shock in ST-elevation myocardial infarction

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Class</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate PCI is indicated for patients with cardiogenic shock if coronary anatomy is suitable. If coronary anatomy is not suitable for PCI or PCI has failed, emergency CABG is recommended.</td>
<td>I</td>
<td>B</td>
</tr>
<tr>
<td>Invasive blood pressure monitoring with an arterial line is recommended.</td>
<td>I</td>
<td>C</td>
</tr>
</tbody>
</table>
WHAT TO DO?

- CABG
- PCI

Recommendations for the management of cardiogenic shock in STEMI

Immediate PCI is indicated for patients with cardiogenic shock if coronary anatomy is suitable. If coronary anatomy is not suitable for PCI, or PCI has failed, emergency CABG is recommended.

Routine intra-aortic balloon pumping is not indicated.

PCI STRATEGY

Complete revascularization during the index procedure should be considered in patients presenting with cardiogenic shock.

Intra-aortic balloon pumping should be considered in patients with haemodynamic instability cardiogenic shock due to mechanical complications.

Routine intra-aortic balloon pumping is not indicated.
WIRING OF LAD BY BMW WIRE
PTCA BY MAVERICK 2.0X20MM

CONTROL ANGIO
FIXATION OF DISTAL LESION BY DES
2.75X34MM
FIXATION OF PROXIMAL LESION BY DES 3.0X22MM
PTCA OF RCA

FIXATION OF RCA BY DES 3.0X33MM
THANK YOU