ECMO Allegretto: *The Milan Out-of-Hospital ECLS Algorithm*

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NO CONFLICT OF INTEREST
Headquarters of regional emergency system

- Area 23’863 km2
- mixed urban/rural environment
- Population 9’826’141
SOREUM AGENCY retrospective analysis

1364 OHCA

- Manual CPR 1059
  - No ROSC 735 (d468)
  - ROSC 324
- Mechanical CPR 305
  - NO ROSC 216 (d29)
  - ROSC 89

Mistraletti to be submitted
## Survival

<table>
<thead>
<tr>
<th></th>
<th>Manual MCE</th>
<th>Mechanical MCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>emergency</td>
<td>316 (30.2)</td>
<td>168 (55.8)</td>
</tr>
<tr>
<td>24h</td>
<td>240 (23.8)</td>
<td>112 (38.4)</td>
</tr>
<tr>
<td>ICU</td>
<td>129 (12.9)</td>
<td>46 (15.4)</td>
</tr>
<tr>
<td>H</td>
<td>116 (11.6)</td>
<td>44 (15.1)</td>
</tr>
</tbody>
</table>

Mistraletti to be submitted
ECLS data

<table>
<thead>
<tr>
<th></th>
<th>ECLS 106</th>
<th>SURVIVAL 6</th>
<th>DONATION 13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGE</strong></td>
<td>54 (42-63)</td>
<td>41 (38-50)</td>
<td>52 (44-55)</td>
</tr>
<tr>
<td><strong>SHOCKABLE RYTHM</strong></td>
<td>73 (68.9%)</td>
<td>6 (100%)</td>
<td>7 (53.9%)</td>
</tr>
<tr>
<td><strong>NO FLOW TIME</strong></td>
<td>9 (6-12)</td>
<td>7 (6-8)</td>
<td>10 (6-13)</td>
</tr>
<tr>
<td><strong>MCPR</strong></td>
<td>81 (76.4%)</td>
<td>6 (100%)</td>
<td>12 (92.3%)</td>
</tr>
</tbody>
</table>

Mistraletti to be submitted
Witnessed Refractory CA (CPR>15min)

Comorbidities? *

No Indication

Assessment of No-flow

No flow < 6 with Bystander CPR

No Indication

FV/TV

No Indication

Assessment of time from collapse to door

Time > 60 min

No Indication

Assessment of End-Tidal CO₂

End-Tidal CO₂ < 10mmHg after 20 min CPR

No Indication

Evaluation for ECMO support

* Comorbidities:
- terminal malignancy
- aortic dissection
- severe peripheral arteriopathy
- severe cardiac failure without transplant indication
- severe aortic valve failure.
Witnessed Refractory CA (CPR>15min)

Comorbidities? *

No Indication

Assessment of No-flow

No flow < 12 with Bystander CPR

FV/TV

Assessment of time from collapse to door

Time > 60 min

End-Tidal CO₂ < 10 mmHg after 20 min CPR

Evaluation for ECMO support

* Comorbidities:
  - terminal malignancy
  - aortic dissection
  - severe peripheral arteriopathy
  - severe cardiac failure without transplant indication
  - severe aortic valve failure.

AGE: 12-70

MCPR
Ecls in out of hospital cardiac arrest

5 hospitals grant an ECLS-team 24/7

- San Gerardo (Monza) (Prof. G. Foti)
- San Raffaele (Milan) (Dr. F. Pappalardo)
- Humanitas (Rozzano) (Prof. M. Cecconi)
- Sacco (Milan) (Dr E. Catena)
- Policlinico (Milan) (Prof. A. Pesenti)

WORKS ARE IN PROGRESS
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