A Patient with Chest Pain and Atrial Fibrillation

ACCA Masterclass 2017

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Declaration of Interest

Lecturing & Consulting Activities:
AstraZeneca, Boehringer-Ingelheim, Bristol-Myers Squibb,
Daiichi Sankyo, Pfizer, Sanofi Aventis
Case Report

• 76-yr old woman
• Risk Factors
  – Hypertension since 10 years
  – Moderate hyperlipidemia
  – Current smoker
• Paroxysmal atrial fibrillation since 10 years (8-10 x/yr)
• Arrives the hospital with ongoing chest pain since 6 hours
• Current therapy
  – Beta blocker, ACE-inhibitor, statin, aspirin (100 mg/d)
## Laboratory Results

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hs-cTnI</td>
<td>245 ng/ml</td>
<td>(&lt;14)</td>
</tr>
<tr>
<td>Total-Chol</td>
<td>215 mg/dl</td>
<td>(&lt;200)</td>
</tr>
<tr>
<td>LDL-C</td>
<td>117 mg/dl</td>
<td>(&lt;135)</td>
</tr>
<tr>
<td>HDL-C</td>
<td>47 mg/dl</td>
<td>(&gt;60)</td>
</tr>
<tr>
<td>eGFR</td>
<td>45 ml/min/1.73m²</td>
<td>(&gt;60)</td>
</tr>
</tbody>
</table>
### Stroke Risk (CHADsVASC-Score)

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHF or LV dysfunction</td>
<td>1</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1</td>
</tr>
<tr>
<td>Age ≥75 years</td>
<td>2</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1</td>
</tr>
<tr>
<td>Stroke/TIA/TE</td>
<td>2</td>
</tr>
<tr>
<td>Vascular disease</td>
<td>1</td>
</tr>
<tr>
<td>Age 65–74</td>
<td>1</td>
</tr>
<tr>
<td>Sex category (female)</td>
<td>1</td>
</tr>
</tbody>
</table>

CHF = congestive heart failure; LV = left ventricular; TIA = transient ischaemic attack; TE = thromboembolism; OAC = oral anticoagulant;
Bleeding Risk (HASBLED-Score)

<table>
<thead>
<tr>
<th>Letter</th>
<th>Clinical characteristic</th>
<th>Points awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Hypertension</td>
<td>1</td>
</tr>
<tr>
<td>A</td>
<td>Abnormal renal and liver function (1 point each)</td>
<td>1 or 2</td>
</tr>
<tr>
<td>S</td>
<td>Stroke</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>Bleeding</td>
<td>1</td>
</tr>
<tr>
<td>L</td>
<td>Labile INRs</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>Elderly (e.g. age &gt;65 years)</td>
<td>1</td>
</tr>
<tr>
<td>D</td>
<td>Drugs or alcohol (1 point each)</td>
<td>1 or 2</td>
</tr>
</tbody>
</table>

Maximum 9 points
What is your preferred strategy?

- Pharmacologic stabilization and stress testing during the hospital stay, angiography only when stress testing is positive
- Coronary angiography within 72 hours
- Coronary angiography within 24 hours
What was our preferred strategy?

- Pharmacologic stabilization and stress testing during the hospital stay, angiography only when stress testing is positive
- Coronary angiography within 72 hours
- **Coronary angiography within 24 hours**
CAG after CPI and Stenting
What is your antithrombotic strategy?

- Aspirin plus Ticagrelor
- Aspirin plus Ticagrelor plus a NOAC
- Aspirin plus Clopidogrel plus a NOAC
- Aspirin plus Clopidogrel plus VKA
- Clopidogrel plus a NOAC
What was our antithrombotic strategy?

- Aspirin plus Ticagrelor
- Aspirin plus Ticagrelor plus a NOAC
- **Aspirin plus Clopidogrel plus a NOAC**
- Aspirin plus Clopidogrel plus VKA
- Clopidogrel plus a NOAC
What is the duration of DAPT plus NOAC/VKA?

- 1 month, then dual therapy up to 12 months, then NOAC only
- 6 months, then dual therapy up to 12 months, then NOAC only
- 12 months, then NOAC only
Antithrombotic therapy after PCI in ACS and atrial fibrillation patients requiring anticoagulation

AF Patient in need of OAC after an ACS

- Bleeding risk low compared to risk for ACS or stent thrombosis
  - Time from PCI
    - 0
    - 1 month
    - 3 months
    - 6 months
    - 12 months
    - Lifelong
  - Triple therapy (IIaB)
  - Dual therapy (IIaC)
  - OAC monotherapy (IB)

- Bleeding risk high compared to risk for ACS or stent thrombosis
  - Triple therapy (IIaB)
  - Dual therapy (IIaC)
  - OAC monotherapy (IB)

Kirchoff et al. Eur Heart J 2016
What is the duration of DAPT plus NOAC/VKA?

- 1 month, then dual therapy up to 12 months, then NOAC only
- 6 months, then dual therapy up to 12 months, then NOAC only
- 12 months, then NOAC only
Atrial Fibrillation Guidelines 2016

- The use of all oral anticoagulants is possible (VKA, NOACs)
  - If VKA: INR 2,0-2,5
  - If NOAC: lower effective dose (2x110 mg dabigatran, 1x15 mg rivaroxaban, 2x2,5 mg apixaban, 1x30 mg edoxaban)

- Do NOT USE second generation P2Y_{12}-inhibitors in combination with OAC

- Newer generation DES (preferable) or BMS can be used in patients with AF undergoing coronary stenting
2466 patients with clinical indication for PCI & 1 or more inclusion criteria (high bleeding risk)

BMS (n=1227) BioFreedom (n=1239)

DAPT for 4 wks.

New P2Y12 inhibitors ~6%

Triple Rx ~33%

Primary Safety EP: cardiac death, MI or stent thrombosis

Primary Efficacy EP: clinically-driven TLR (both at 1 yr.)

LEADERS FREE Trial

Primary Efficacy Endpoint (clinically-driven TLR)

Cumulative Percentage with Event

Days

0 90 180 270 390

p for superiority < 0.001

9.8%

5.1%