Long-term Clinical Outcome after First Definite Stent Thrombosis

On behalf of the Dutch Stent Thrombosis Registry investigators

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Background

- Estimated incidence of Stent thrombosis (both DES and BMS): 1-4%

- Short-term clinical outcome after ST varies in registries (mortality 10-40%)\(^1\)\(^-\)\(^3\)

- Long-term clinical outcome after ST is less extensively studied

\(^1\)Iakovou, JAMA 2005
\(^2\)Kuchulakanti, Circulation 2006
\(^3\)de la Torre-Hernández, JACC 2008
Dutch Stent Thrombosis Registry

- Multicenter observational study, enrolling all consecutive patients with stent thrombosis

- Inclusion period: Jan 2004 – Feb 2007

- Angiograms (index procedure + stent thrombosis) were reviewed independently by two interventionalists

- Follow-up: patient interview, hospital records, referring physicians, general practitioner and pharmacies
Aim

- To study the short- and long-term clinical outcome after a first “definite” stent thrombosis

- To identify predictors of adverse clinical outcome
Endpoints

Primary:  - A composite of cardiac death and definite recurrent stent thrombosis

Secondary:  - Death (Cardiac and All-cause)
- Definite and definite + probable recurrent ST
- Any Myocardial Infarction
- Any TVR
431 patients with a first “definite” stent thrombosis

Inclusion period: Jan 2004 – Feb 2007

421 Emergent PCI’s:
- 203 Balloon angioplasty alone
- 214 PCI with additional stent
- 4 aspiration only

10 patients:
- 4: target artery too small
- 2: emergent CABG
- 2: passage failure of balloon
- 2: died before reperfusion

MACE
Follow-up and In-hospital MACE

- Median follow-up: 27.1 months [IQR 17.4-37.1]
- Follow-up was available in 416 (96.5%) pts

<table>
<thead>
<tr>
<th>Primary Endpoint in Hospital</th>
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<tr>
<td>Cardiac death</td>
<td>26 (6.0%)</td>
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<tr>
<td>Definite recurrent ST</td>
<td>44 (9.3%)</td>
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Primary Endpoint

Event free survival

Cardiac death

“definite” recurrent stent thrombosis

Primary endpoint

0 30 1 yr 2 yr 3 yr
Conclusions

- Long-term survival after *definite* stent thrombosis ± 85%
- Recurrent stent thrombosis ± 20%
- Predictors of unfavourable outcome:
  - DM
  - LVEF <45%
  - Severe lesion calcification
  - Complex lesion stenting
  - Longer stent length
  - LAD stenting
  - Additional stent implantation during ST
  - TIMI flow post ST<3