When are F/B EVAR procedures are better and more cost effective for complexe AAAs and TAAAs
The French experience

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Disclosure

• None

What is Cost Effectiveness
And Why is it Useful for the Society?

1) Resources of the healthcare systems are limited
2) A need to determine the most efficient procedure for a reasonable amount of money

Costs

- A < B
  - More Efficient
  - Less Costly

- A > B
  - More Efficient
  - More Costly

Efficacy

- A > B
  - More Efficient
  - Less Costly

- A < B
  - Less Efficient
  - Less Costly

Adopt
Reject
Discussion

Windows Trial

Multicenter prospective non randomized comparison

of F - Bevar vs Open Surgery

Supported by the a Public Grant to obtain reimbursement

Comparative study -> Patient’s data

- F and Bevar: CRF and PMSI (national database)
- Open surgery: PMSI (2010 et 2011)

Main Diagnosis and Type of Repair

- Aortic Aneurysm (intact)
- Open (supra renal clamping) or Endo repair
Evaluation

- Clinic: data from CRF (f and bevar) and PMSl (open)
- DAS et acts (codes CIM-10 et CCAM)
- Comorbidities: assessed during the initial hospitalization
- Complications: further hospitalizations
- Death: Outcome code = 9
- Economic: Data from all Health Care Provider (AMO, AMC, patient)
- Cost of hospitalizations MCO within 2 years: tariff GHS, extra days cost (ICU, ...), forfait hospitalier

Distribution

Patients n=1946 -> Three Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>n=1946</th>
<th>184 vs 1382</th>
<th>42 vs 225</th>
<th>42 vs 71</th>
</tr>
</thead>
<tbody>
<tr>
<td>F and Bevar</td>
<td>Open</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Costs

- F Bevar: 38 212 € (±23 252)
- Open: 16 497 € (±16 695)

p<0.0001

<table>
<thead>
<tr>
<th>Group</th>
<th>F Bevar vs open</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (±ET)</td>
<td>p</td>
</tr>
<tr>
<td>Group 1</td>
<td>34 425 (±22 021)</td>
</tr>
<tr>
<td>Group 2</td>
<td>37 927 (±11 994)</td>
</tr>
<tr>
<td>Group 3</td>
<td>54 710 (±28 919)</td>
</tr>
</tbody>
</table>

Mortality

<table>
<thead>
<tr>
<th>Group</th>
<th>12 %</th>
<th>20 %</th>
<th>4.5%</th>
<th>5 %</th>
<th>12 %</th>
<th>4%</th>
</tr>
</thead>
</table>

Cost Effectiveness at 30 Days

<table>
<thead>
<tr>
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F and Bevar Survival Analysis

Rehospitalizations Within 2 yrs

- Average number of rehospitalizations:
  - F and Bevar: 3.1
  - Open: 2.8 (p=0.7599)
  - CMD 05 (<CV event): 1.1 vs. 0.7 (p=0.1427)

Complications (within 2 yrs)

<table>
<thead>
<tr>
<th>Complication</th>
<th>F and Bevar n (%)</th>
<th>Open n (%)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amputation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MI</td>
<td>0 (0%)</td>
<td>2 (3%)</td>
<td>0.27</td>
</tr>
<tr>
<td>Stroke</td>
<td>1 (2%)</td>
<td>2 (3%)</td>
<td>0.89</td>
</tr>
<tr>
<td>SCI</td>
<td>7 (17%)</td>
<td>10 (14%)</td>
<td>0.71</td>
</tr>
<tr>
<td>Mechanical Ventilation ≥ 7 days</td>
<td>4 (10%)</td>
<td>25 (35%)</td>
<td>0.003</td>
</tr>
<tr>
<td>Bowel infarct</td>
<td>1 (2%)</td>
<td>6 (8%)</td>
<td>0.20</td>
</tr>
<tr>
<td>Hemodialysis permanent</td>
<td>1 (2%)</td>
<td>6 (8%)</td>
<td>0.20</td>
</tr>
<tr>
<td>Reintervention</td>
<td>11 (26%)</td>
<td>18 (25%)</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Total Cost at 2 yrs

- 65 643 € (±32 094) per patient for F/Bevar
- 43 164 € (±41 061) for open surgery (p=0.0010)

> 22 000 euros

In Summary

- F and B evar were globally not cost/effective
- TAAAs: was the only group close to cost effectiveness
- The Windows trial has limits:
  - It is not a randomized trial
  - Open Surgery included Less Risky Patients
  - F / Bevar patients were unfit for open repair

It is the only cost effectiveness study currently available
What Happened Next?

- F evar and B evar from Cook and Vasutek are currently reimbursed in France

- But for a limited number of patients / year! (cost containment issues)

STIC: actors

- C. Scientifique: JP Becquemin, J Marzelle
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- Saisie des données Clininfo Lyon: V Pelletier
- Centres investigateurs: Lille, Créteil, Lyon, Bordeaux, Nantes, Marseille, St Etienne