Value of the Quick Carotid Scan for Screening: Is it Ready for Widespread Use to Detect Asymptomatic Carotid Stenosis if Most Patients are Best Treated Medically

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“Nothing To Disclose”

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Problem

• Immediate causes of stroke: COD, AF, HT - asymptomatic 80%
• Strokes continue 800,000/yr. for decades & remain leading cause of disability & line item expenditures for Medicare
• Screen seniors

Screening Methods

• Risk Factors – sensitivity 50%
• Duplex Ultrasound – too long
• Quick Carotid Scan (QCS)

Quick Carotid Scan

• Rapid image only scan
• No history, velocities, counseling, hard copy
• Less than 1 minute
• Sensitivity 97% @ NYU
• Capability of screening virtually all seniors
**Implimentation**

- Medical establishment - evaluation & management available
- Open to all seniors
- Screening costs minimal
- Line-up, sit on chair, scan – like flu shot
- Life Line Screening - seniors knew stroke risk

**Potential Results**

- Incidence ACS 7.5%
- 48 mil seniors = 3.6 mil
- Strokes @4%/yr. = 144 K = 18% of 800 K
- Largely preventable by preemptive Rx

**Anti-Screening**

- Screening > harm than good - Dx/Rx>no Dx/Rx
- USPSTF – incidence -1% gen'l pop - 7.5% seniors
  Screen 1500 prev. 1 stroke – screen 200
- Statistics – meta analysis - bikini
- Need level I evidence to screen – now not screening without level I evidence
- Risk of CEA - all inclusive, consecutive, statewide, MD, NE, CA > 60K –strokes <1%

**Operative Stroke Rate - CEA**

<table>
<thead>
<tr>
<th>SITE</th>
<th>#</th>
<th>PERIOD</th>
<th>STROKE RATE-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACAS</td>
<td>825</td>
<td>5 yrs.</td>
<td>1.00</td>
</tr>
<tr>
<td>Maryland</td>
<td>23,257</td>
<td>10 yrs.</td>
<td>0.73</td>
</tr>
<tr>
<td>California</td>
<td>51,331</td>
<td>5 yrs.</td>
<td>0.54</td>
</tr>
<tr>
<td>New England</td>
<td>5,097</td>
<td>1 yrs.</td>
<td>1.00</td>
</tr>
<tr>
<td>Lavenson</td>
<td>1,623</td>
<td>15</td>
<td>0.75</td>
</tr>
</tbody>
</table>

**Conclusions**

- Current efforts: (1)Compare Rx ACS & (2)Not to screen to find ACS
- Einstein – definition insanity
- Screen: Cx, breast, colon, prost., gen'l, ?-vasc
- Obligation & opportunity to prevent strokes on epidemiological scale
- Come together & implement QCS
- New in Medicine – must lean into wind of prevailing wisdom

**Post Script**

- Papanicolau (Pap Smear) - 40 yrs
- Lavenson (QCS/Lav Scan) - 20 yrs
Maholo & Aloha

Stroke rate/ACS with 0 recognition & 0 Rx

- No such series
- Stroke rate > least effective Rx in series
- ACAS - BMT - 11%
- ACST - BMT - 10%

Incidence ACS on screening seniors

<table>
<thead>
<tr>
<th>SITE</th>
<th>DATE</th>
<th>SCREENED</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>11/5/97-8/19/99</td>
<td>2605</td>
<td>STEN %</td>
</tr>
<tr>
<td>California</td>
<td></td>
<td></td>
<td>&gt;60</td>
</tr>
<tr>
<td>NYU</td>
<td>2001-2002</td>
<td>610</td>
<td>&gt;60</td>
</tr>
<tr>
<td>MAMC</td>
<td>2003</td>
<td>458</td>
<td>&gt;60</td>
</tr>
<tr>
<td>AVA (SVS + SVU)</td>
<td>5/18/02-6/19/06</td>
<td>18,446</td>
<td>&gt;80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;80</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22,146</td>
<td></td>
<td>&gt;60</td>
</tr>
</tbody>
</table>

**STEN = Stenosis**

*Numbers in parenthesis are percentages

NYU, New York University; SVS, Society for Vascular Surgery; MAMC, Madigan Army Medical Center

**Includes annual screening events. More than 150 leading institutions in more than 40 states at 2006 screening events*