Acute Stroke Care Nursing: What’s hot? What’s next?

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Acute Stroke Care

- Reducing the impact of the initial event
  (protecting the ischaemic penumbra)

- Prevention of secondary brain injury
  (preventing stroke progression)

- Prevention of complications
  (effects of stroke and effects of acute illness)
Stroke

- Increased risk of early chest infection
- Infection risk increased in dependent patients
- 10% of stroke patients develop pneumonia
- Pneumonia associated with death (OR 3.62)
- Pneumonia linked to unsafe swallow
- Pneumonia linked to poor oral hygiene
Clinical Significance

- **Aspirin**: 1%
- **Stroke Unit**: 5%
- **Thrombolysis < 4.5 hrs**: 10%
- **FeSS Intervention**: 15.7%
- **Hemicraniectomy**: 23%
- **Endovascular Rx (tPA plus thrombectomy)**: 31%

NNT
- Aspirin: 79
- Stroke Unit: 18
- Thrombolysis < 4.5 hrs: 14
- FeSS Intervention: 6.4
- Hemicraniectomy: 2
- Endovascular Rx (tPA plus thrombectomy): 3-7

Source: Middleton et al. 2011

QASC: Quality in Acute Stroke Care
The prevalence of aspiration pneumonia did not differ between groups ($p=0.82$)

- 13 [2\%] of 603 in the intervention group
- 13 [3\%] of 483 in the control group
HeadPost

StUDY SITES

Randomisation

Lying Flat Head Positioning
0° for first 24 hours

Sitting Up Head Positioning
≥30° for first 24 hours

Blinded assessment of outcome at 90 days

Crossover

Crossover

Sitting Up Head Positioning
≥30° for first 24 hours

Lying Flat Head Positioning
0° for first 24 hours

Blinded assessment of outcome at 90 days

Standard Nursing and Medical Care
(Local Guidelines)
Positioning compliance was excellent across all clusters with an average of 24 hours for both intervention arms. Only 8% discontinued position permanently during the 24 hours.

<table>
<thead>
<tr>
<th>Duration in Position</th>
<th>Median</th>
<th>24 hours</th>
<th>Reason for discontinuation</th>
<th>Total N=886</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discontinued position permanently</td>
<td>Yes</td>
<td>8%</td>
<td>Not Tolerated</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>85%</td>
<td>Unable to comply</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>7%</td>
<td>Patient Preference</td>
<td>18%</td>
</tr>
<tr>
<td>Lowest oxygen saturation in 24 hours</td>
<td>Median</td>
<td>95%</td>
<td>Doctor’s Preference</td>
<td>4%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Change in Medical Condition</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Missing</td>
<td>1%</td>
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</table>
Stroke and oral flora

- Poor oral hygiene linked to periodontal disease
- Pathogenic bacteria in mouth linked to chest infection
- Gum disease, tooth decay and systemic infections
- Medically compromised patients
- Acute stroke patients - gram-ve bacilli in 34%
- Associated higher mortality
Current Study

- MAPS-2 (Metoclopramide and selective oral decontamination for Avoiding Pneumonia after Stroke)
  - Phase III 2x2 double-blind, randomized controlled trial of metoclopramide and selective oral decontamination
  - Acute phase, NBM, NIHSS>9, n=1160. Primary outcome mortality
  - Starting 2016
Stroke and oral care

- Poor oral hygiene linked to periodontal disease
- Pathogenic bacteria in mouth linked to chest infection
- Gum disease, tooth decay and systemic infections

- Oral care - mouth clean and fresh, sense of well-being
Oral care

- Poor oral health within supported care (Hally, 2003)
- Low priority in the hierarchy of care (Adams, 1996)
- Nursing staff dislike oral care (Boyle, 1992)
- Often delegated to health care staff (Wårdh, 1997)
- Lack of knowledge and equipment (Wårdh et al 2000)
- Lack of evidence for oral care interventions (Brady, 2006)
Current Study

• **SOCLE II (Stroke Oral healthCare pLan Evaluation)**
  - Phase II multicentre, cluster-randomised trial of an oral hygiene intervention for IP stroke care.
  - Nearing completion
What’s next?

- **Trial Oral Care**
  - Pneumonia??
  - Mouth clean and fresh?
  - Sense of wellbeing?

- **Survey of current practice**
  - What is usual care? (different types of patient?)
  - What training/education?
  - What protocols and guidelines?
  - What intervention(s)?
  - What are the challenges to implementation
  - What outcome measures (staff and patients?)
Please help by responding to the survey!