NAP 5 FOR THE OBSTETRIC ANAESTHETIST

(and for anaesthetists who do obstetrics)

THE PERFECT STORM

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Declaration of interest

Member of steering group for NAP5 and lead for obstetrics.
Learning objectives

To be aware of the findings of NAP5 in relation to current obstetric anaesthetic practice

To understand the implications for use and practice of general anaesthesia in obstetrics

To consider the proposed research in relation to the findings
The Activity Survey showed us

that Obstetric general anaesthesia is different....
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- Induction agent
The Activity Survey showed us that Obstetric general anaesthesia is different....

- Rapid sequence induction
The Activity Survey showed us that Obstetric general anaesthesia is different....

- Nitrous oxide
Incidence of awareness from NAP5

All reports submitted 1 : 6000
All reports accepted 1 : 12000
Certain, probable & possible reports 1 : 19600

With NMB 1 : 8200
Without NMB 1 : 135900

Cardiothoracic 1 : 8600

Caesarean section 1 : 670
## Risk factors for awareness:

*obstetric anaesthesia – the ‘perfect storm’*

<table>
<thead>
<tr>
<th>Patient Factors</th>
<th>Organizational Factors</th>
<th>Anaesthetic Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female gender</td>
<td>Non-consultant grade</td>
<td>Thiopentone</td>
</tr>
<tr>
<td>Age (young adults)</td>
<td>Out of hours</td>
<td>RSI</td>
</tr>
<tr>
<td>Obesity</td>
<td>Emergency</td>
<td>NMB</td>
</tr>
<tr>
<td>Difficult airway</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Characteristics of obstetric cases

<table>
<thead>
<tr>
<th>variable</th>
<th>number</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Non elective</td>
<td>11</td>
<td>79</td>
</tr>
<tr>
<td>Out of hours [01.00- 08.00]</td>
<td>9</td>
<td>64</td>
</tr>
<tr>
<td>Airway difficulty</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td>Obesity</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Rapid sequence induction</td>
<td>13</td>
<td>92</td>
</tr>
<tr>
<td>Low dose of thiopentone</td>
<td>7</td>
<td>50</td>
</tr>
<tr>
<td>N₂O not used</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td>End-tidal monitoring not used</td>
<td>4</td>
<td>29</td>
</tr>
</tbody>
</table>
The obstetric gap

Induction agent: thiopentone v propofol/ dose
Airway difficulty
MAC used
Increased cardiac output
Indication for general anaesthesia
Recommendations

• Discuss AAGA as part of informed consent

• Changes to GA technique

• Plan for maintenance of anaesthesia during airway difficulties

• Failed regional is a risk factor for other complications

• Caution with antibiotic syringes
Changes in GA technique

• Higher dose of thiopentone
  5mg/kg

• Higher concentration of
  inhalational agent (with
  uterotonics)

• Early use of N2O and
  opioids
Thiopentone versus propofol

Advantage of thiopentone

• Used for many years
• Relatively cardiostable
• Longer duration

Disadvantages of thiopentone

• Risk of antibiotic syringe swap
• Requires pre-mixing
• More expensive
• In short supply

Advantages of propofol

• More familiar to current generation (evidence of over & underdosing)
• No evidence of adverse fetal effects
• Can give repeated doses
• Avoids disadvantages of thiopentone

Lucas Anaesthesia 2015; 70: 375

OAA Torquay 2015
Research Implications

- Optimum drug (and dose) for induction
- Optimum timing & dose of opioids
- Safe minimum FiO2 (especially with fetal compromise
- Use of uterotonics to counteract tocolytic effect of volatiles
- True incidence of awareness and reporting rates
Future challenges?

NAP5 provides further evidence to avoid GA in obstetric practice

Is it time to stop using a 50 year old technique based on fear of the fetus & uterine atony?

The lack of seniority of anaesthetist in cases of AAGA give further weight to the recommendation for expanded consultant presence of delivery suites