Is there a place for surgical home in airway patients

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I have no COI to disclose

Outline

• Is there a specific need for children?  WHY
• Is there any risk? WHAT
• Selecting the appropriate patients? WHO

Why perioperative surgical home?

« The triple Aim »
Care – Health - Cost

• New structure of health care : 3 dimensions:
  – Improve quality of care and patient satisfaction
  – Improve health of populations
  – Reduce per capita cost of health care

  ➔ Optimise health system performance

The Perioperative Surgical Home serving as the Integrator to accomplish the Institute for Healthcare Improvement's Triple Aim within surgical care

Who can (should) do it?

- **American model**: Internists, hospitalists, general physicians, surgeons, anesthetic nurses, advanced nurse practitioners, anesthesiologists, ……
- **English model**: Program of MSc: for interested physicians (anaesthetists, surgeons and internists) and nurses engaged in the perioperative management.
- **European model**: Integral part of the mission of the ESA and integrated in the core curriculum

**Anaesthesiologists**

- Skills, broad knowledge and expertise
- Opportunity to be engaged and be the driving force in the decision making & take control of committees focused on perioperative medicine
- Implication in the health system management

**Airway patients**

- Postoperative support
  - Coordination of services
  - Pain relief
  - Standardisation
  - Transitions

**Anaesthesiologists**

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- Opportunity to be engaged and be the driving force in the decision making & take control of committees focused on perioperative medicine
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**Email**


**Critical safety net for children in the perioperative period**


**« Time to Get on the Bus: Children’s Surgery and Where We Need to Go”**

- Providing safe, high-quality surgical care is equally predicated on:
  - Anesthesia
  - Perioperative nursing
  - Rapid response teams
  - Code teams, and transfer teams

**Improving patient-centered care**

- Family is the child’s primary source of strength and support and that the child’s and the family’s perspectives and information are important in clinical decision making.”

**Improving child-family-centered care**

What is the risk?

Most of the adverse events encountered in pediatrics are preventable

Particularly in neonates, infants and in adolescents

1.4 Severe Adverse Events per 1000 anaesthetics

National Pediatric Anesthesia Safety Quality Improvement Program in the United States.

WAKE-UP SAFE


Risk factors for increase morbidity and mortality in anaesthesia

⇒ Failure to DETECT

⇒ Failure to RESCUE

More than 50% of periorpative morbidity in paediatric anaesthesia is of respiratory origin
Preoperative Risk Assessment

- Predictable and preventable: Assess to Identify
- Predictable but Unpreventable: Assess to Plan and Anticipate
- Unpredictable and Unpreventable: Assess to inform

Preoperative assessment prior to surgery is mandatory

A
B
C
Airway
Bronchial Hyperreactivity
Obstructive Apnoea
Cardiac

Children at risk of OSA have higher risk for apnoea and potentially severe outcome

Failure to assess in more than 30% of the cases

Failure to RESCUE

Clinical status
Patient gets sicker
Implementation of Pediatric Early Warning Signs (PEWS)

Patient worsens
Dramatic intervention

Modified from Patient Safety & Quality Healthcare July 2005; www.psqh.com


Who is concerned?

Risk factors for the development of OSAS in children

- Hypertrophy of tonsils and/or adenoids
- Obesity
- Neuromuscular diseases associated with hypotonia
- Genetic diseases associated with hypoplasia of the middle third of the face
- Metabolic diseases
- Micrognathia and a narrow nasopharynx
- Laryngomalacia
- Brain malformations involving the skull base

Pain affects significantly the incidence of POB changes

<table>
<thead>
<tr>
<th>% children</th>
<th>Odds ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>5th week</td>
<td>4.44</td>
<td>(3.5, 5.48)</td>
</tr>
<tr>
<td>1st month</td>
<td>9.84</td>
<td>(8.92, 10.76)</td>
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Congenital and Syndromes

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Airway implication</th>
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</thead>
<tbody>
<tr>
<td>Pierre Robin sequence</td>
<td>Micrognathia, glossoptalmia, cleft palate</td>
</tr>
<tr>
<td>Goldenhar syndrome</td>
<td>Micrognathia, small oral opening, zygomatic hypoplasia</td>
</tr>
<tr>
<td>Treacher Collins syndrome</td>
<td>Micrognathia, cleft palate, coronal dysplasia</td>
</tr>
<tr>
<td>Apert syndrome</td>
<td>Micrognathia, small oral opening, zygomatic hypoplasia</td>
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<tr>
<td>Hunter and Hunter syndrome</td>
<td>Micrognathia, narrow mouth</td>
</tr>
<tr>
<td>Beckwith-Wiedemann syndrome</td>
<td>Micrognathia</td>
</tr>
<tr>
<td>Freeman-Sheldon syndrome</td>
<td>Crouzon facies, micrognathia, limited coronal motion</td>
</tr>
<tr>
<td>Doran syndrome</td>
<td>Anal dimorphisms, small oral cavity, micrognathia</td>
</tr>
<tr>
<td>Klippel-Feil syndrome</td>
<td>Cervical fusion</td>
</tr>
<tr>
<td>Hallerman-Streiff syndrome</td>
<td>Micrognathia</td>
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<tr>
<td>Arthrogryposis</td>
<td>Cervical dysplasia</td>
</tr>
<tr>
<td>Cri-du-chat syndrome</td>
<td>Micrognathia, laryngomalacia</td>
</tr>
<tr>
<td>Tethered spinal cord syndrome</td>
<td>Micrognathia</td>
</tr>
<tr>
<td>Fibrodyplasia ostiocrina</td>
<td>Limited coronal motion</td>
</tr>
</tbody>
</table>

Pediatric airway patients

Pediatric airway surgery

Perioperative continuum of care

Preoperative assessment ➔ anesthesia management ➔ post discharge care

Pediatric Perioperative Surgical Home
Patient safety

Patient safety means that the overall management of patients has to be taken into account during the entire perioperative period – from preanaesthetic consultations through the intraoperative time and into postoperative management.

- Change in culture
- System Safety