What parents ask:

• What should I give my child for their pain?
What parents ask:

- What should I give them for their pain?
  - paracetamol or
  - painstop (paracetamol / codeine)

worried about OSA and airway obstruction
codeine to avoid strong opioids
What we worry about...

- Codeine has fallen out of favour
  - CYP 2D6 polymorphism
    - 10% poor metabolisers
    - 1% ultra fast metabolisers
      - Reports of deaths following codeine administration in children undergoing tonsillectomy

NSAIDs

Concerns regarding effect on platelets and increased risk for life threatening postoperative bleeding
What parents ask:

• How long will my child be in pain?

• How long will they need pain relief?
What parents ask:

• How long will my child be in pain?

• How long will they need pain relief?

“a few days”
What parents ask:

- How long will my child be in pain?
- How long will they need pain relief?

  a few days
  
or

  “I have no idea!”
Declaration

• I haven’t undergone tonsillectomy

• My children haven’t undergone tonsillectomy

• I haven’t found the answers in a textbook

• Usually day case or overnight stay with minimal (oral) analgesia
  • no acute pain service follow-up
procedure specific postoperative pain profile

• accurate information for parents and children regarding:
  • degree and duration of pain
  • how long analgesia is required
  • how long before they return to normal functioning
Figure 1
Median Parents’ Postoperative Pain Measurement (PPPM) Scores: Days 1–12. Two pain scores are graphed for each day. The first mark represents the AM score, the second mark the PM score. Error bars demonstrate the 90th and 10th centiles. PPPM score ‡6 represents clinically significant pain.

(a) Tonsillectomy

The graph shows the percentage of patients experiencing different levels of limitation after a tonsillectomy. The x-axis represents the postoperative day, and the y-axis represents the percentage of patients. The graph is divided into three sections:

1. **Severe limitation** area, where the percentage drops sharply, indicating a significant increase in limitation.
2. **Mild limitation** area, with a gradual decrease in the percentage.
3. **No limitation** area, which shows a small, flat line at the top.

The graph indicates that the percentage of patients with severe limitation decreases rapidly in the first few postoperative days, while mild limitation decreases more gradually.
other findings:

- GP consulted postop 54%
  - severe pain
  - suspected infection
- otalgia
- constipation 32%
- halitosis 76%
- voice change 58%
- refusal to eat, drink or take oral analgesia
Postop pain after tonsillectomy is a problem
Furthermore apart from paracetamol, it is unclear what analgesia is “safe” or effective
Basic Principles

• Regular dosing of analgesic ladder base is better than prn

• Example:
  • paracetamol
  • NSAID
  • + / - opioid / tramadol
Barriers to effective analgesia

- Administration burden
  - frequency of administration
    - hurts to swallow
    - taste
    - volume
    - waking children to give analgesia
Where are we now?

- Paracetamol 15mg/kg qid
- Celecoxib 4mg/kg bd
- Oxycodone 0.1-0.2mg/kg q 4h
- Tramadol 2mg/kg q 6h
Barriers to effective analgesia

• Formulation
  • Liquid vs tablet / capsule

<table>
<thead>
<tr>
<th></th>
<th>liquid</th>
<th>tablet</th>
<th>capsule</th>
</tr>
</thead>
<tbody>
<tr>
<td>paracetamol</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>celecoxib</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>oxycodone</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>tramadol</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>
Tramadol

- Liquid preparation: 100mg / ml

or

- Capsule contents 50mg diluted with 10ml water
Tramadol

- dose accuracy similar

- overdose potential reduced
  - max dose 50mg
    - 10kg infant, 2.5x

Kluger, Penrose, Bjorksten & Chalkiadis
Regulatory issues

• OTC analgesics:
  • paracetamol
  • Painstop – FDA warning
  • ibuprofen

• Prescription
  • stronger opioids
  • tramadol
  • celecoxib
Other barriers to effective analgesia:

- Parents not giving analgesia
  - reluctant to give analgesia
  - don’t understand postop instruction
  - conflicting instruction
  - no instruction
  - not sure about pain assessment
Other barriers to effective analgesia:

- Health care providers:
  - are we giving parents adequate info re what to expect?
  - who prescribes discharge analgesia
  - where do parents get more analgesia from?
  - are parents instructed how to assess pain?
  - are we instructing them to give effective pain relief optimally
- Do we really know what analgesia is optimal?
Review of barriers to effective analgesia:

Effective postoperative pain management in children after ambulatory surgery, with a focus on tonsillectomy: barriers and possible solutions

Other analgesic strategies:

• Analgesia to facilitate eating
  • Lignocaine viscous 4% gargle
  • Ice cold slushies
  • Timing of analgesia prior to food
  • Coca cola

• Slow release analgesia
conclusion

- Tonsillectomy results in moderate – severe pain and is associated with functional limitation.
- Recent practice results in frequent GP attendance due to parental concerns regarding pain / infection.
- Children may be reluctant to swallow analgesia because it is painful to do so.
- Parents should be instructed in pain assessment and about analgesia administration.
conclusion

- Paracetamol 15mg/kg qid
- Celecoxib 4mg/kg bd
- Oxycodone 0.1-0.2mg/kg q 4h
- Tramadol 2 mg/kg q 6h