Tonsillectomy Techniques and Outcomes

David J. Beste, MD
Pediatric Otolaryngology
Department of Otolaryngology and Communication Sciences

Outcomes legal definition

• Noun - achievement, aftereffect, aftermath, answer, attainment, close, completion, consequence, creation, culmination, decision, denouement, development, effect, end, end product, ending, eventuation, finding, finish, fruit, fruition, fulfillment, issue, judgment, offspring, outgrowth, etc., etc, etc.

Outcomes definition business

• Determination and evaluation of the results of an activity, plan, process, or program and their comparison with the intended or projected results. See also output measure.
Outcomes Research definition

- Outcomes research was defined in 1998 as “the study of the end results of health services that takes patients’ experiences, preferences, and values into account … intended to provide scientific evidence relating to decisions made by all who participate in health care.”¹

Draft: Effectiveness comparative review, 2016
Tonsillectomy for Obstructive Sleep-Disordered Breathing or Recurrent Throat Infection in Children
Agency for Healthcare Research and Quality
US Department of Health and Human services

Review Database from 1980-Aug 2015
Comparative studies for:
- Tonsillectomy
- Perioperative medications
- Postoperative medications for pain-related outcomes
- Case series and database or registry studies with > 1000 children to address harms
State of the Tonsillectomy literature

- 197 unique studies addressing benefits and harms
  - Tonsillectomy, adenotonsillectomy, partial tonsillectomy, tonsillotomy
  - 136 randomized controlled studies (RCT), 10 nonrandomized CT, 6 prospective, 4 retrospective cohort, 18 database or registry studies, 23 case series

5 Key questions were asked

1. Effectiveness of Tonsillectomy vs no surgery for OSDB
   - Neuromuscular or craniofacial abnormalities
   - Under 3 years of age
   - Down Syndrome
   - Obesity
5 Key questions were asked

2. Effectiveness of tonsillectomy vs No surgery for recurrent throat infections
3. Effectiveness of partial vs Total tonsillectomy
4. Effectiveness of surgical techniques
5. Effectiveness of perioperative medications to improve outcomes.

Obstructive Sleep disordered Breathing - OSBD
Tonsillectomy versus no intervention
   Most studies reported Better sleep related outcomes with tonsillectomy
   Improvements moderate and mixed
Tonsillectomy versus CPAP
   Few studies but no superiority over CPAP
   Few studies about special populations (e.g. Down’s syndrome, obesity)

Recurrent Throat infection Definition

• 5 or more episodes of true tonsillitis a year
• Symptoms for at least a year
• Episodes that are disabling and prevent normal functioning.
  - Lack of consensus on “disabling symptoms”
Recurrent Throat infections

- Tonsillectomy versus no surgery (still getting medical care)
  - First year postoperatively, improvement in number of infections, associated utilization, (clinician visits), days of school/work missed, quality of life
  - “Benefits diminished over time, however, and data on longer term outcomes are limited.

Techniques of tonsillectomy

- “Hot” vs Cold tonsillectomy dissection
  - “Hot”, i.e. coblation and electrocautery
  - “Hot” - Faster recovery
- Partial vs Total Tonsillectomy
  - Partial associated with faster recovery, i.e. return to normal diet and activity
  - Partial has risk of regrowth requiring reoperation

Bleeding related harms with tonsillectomy

- Low rate (<4% in meta-analysis)
Perioperative care in tonsillectomy

Dexamethasone
- Less need for rescue analgesia
- Reduced bleeding

Preemptive anti-emetics
- Less need for postoperative anti-emetics

Postoperative medications
- Few studies addressed the same agents or outcomes

References
1. http://www.businessdictionary.com/definition/outcome-measure.html#ixzz4E6TTZ1FM