**ENT Paediatric Update**

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**Overview**

**Ear:**  
SWISH  
OAEs  
Grommets  
Mastoiditis  
Otitis Externa  
New Technologies

**Nose:**  
Sinusitis  
Sinusitis vs. Facial pains

**Throat:**  
OSAS, SDB  
New Technologies

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**Ear Topics**

**Ear:**  
SWISH  
OAEs  
New Technologies:  
BAHA  
Implantable Hearing

Grommets  
Mastoiditis  
Otitis Externa

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**SWISH**

A ABR before leaving hospital  
(= Automated Auditory Brainstem Responses)  
Records Auditory Nerve and Brainstem waves from sound stimulation

Some places use OAES which only measure Cochlear Activity

Deafness diagnosis age has dropped from 18 mo to almost 0 mo.


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**Cochlear Motion**
SWISH results

0.9 per 1000 babies screened: Bilateral Severe Permanent Hearing Loss

OAEs: Quick, easy, cheap (vs AABR)

BUT

Referral Rate: OAEs 34% – 44% vs AABR 0.2% - 2.5%
(<2 days old ~70% pass OAEs
>5 days old >90% pass OAEs, but most have gone home)

SWISH..AABR

Ave Age for Fitting Hearing Aids WAS
2 – 2.5 yrs if profound loss
4 – 4.5 yrs if moderate loss

Youngest Cochlear Implant Westmead: 6 months.

GROMMETS: Indications

Recurrent infections

Glue ear

Retraction ear drum

Acute severe infection ...AOM/Mastoiditis

GROMMETS

Shepard............................... 6 – 9 mo
Sheehy (Collar button)...........12 – 18 mo
T-tube.................................2 – 3 yr

Length of time depends on size of flange

BUT bigger flange means bigger risk of persisting perforation
Infected Grommet

- **From URTI**: Respiratory Organisms
  - Traditionally Rx oral A/bs e.g. amoxycillin
  - BUT, recent data confirms that drops: Ciproxin HC are better by far.
- **From swimming/water infections**: MOSTLY pseudomonas
  - So: again Ciproxin HC drops
  - Yes, these are not on PBS, so, next best...

Infected grommet

- 2nd best:
  - Sofradex/Tobrex/Chloromycetin/Locacorten-Vioform
  - “ototoxic” drops are fine IF there is discharge.
  - Problems occur if these drops are put in a dry, 'unprotected' middle ear
  - XS discharge can be cleaned out with Hydrogen Peroxide, or with dilute acetic acid (i.e. diluted vinegar) before the drops are put in.

Water Precautions and Grommets

- It’s the contamination NOT the water
- So: Avoid Contaminated water...
  - Bath water, spas, heated pools, fresh water lakes
- No ear protection for showers, beach, non-heated clean pools
- DO NOT give prophylactic Sofradex-type drops, ‘just-in-case’, after swimming

SEVERE Otitis Externa

- EAR WICKS are 19th Century.
  - Don’t even touch the ear
- Systemic steroid essential, 1 or 2 doses usually plenty.
  - If in A+E
  - Decadron 8 – 12 mgm IV,
  - Gentamycin 180 -240mgm IV (once only)
  - Dicloxacillin 1000 mgm IV (once only)
  - Ciproxin HC drops BD scrip
  - Send home to review in 12 – 24 hours
SEVERE Otitis Externa

- If at your surgery:
  - Don’t fiddle with the ear!!
  - Oral Prednisone 50mgm (keep a few 25 mgm tablets to hand out. They will only need 4) (IF cellulitic add, oral Ciproxin 500–750 mgm BD)
  - Script for Ciproxin HC (or SofraDEX) (Not Soframycin..no steroid) See again in 12 – 24 hours.
  - You can toilet the ear when the swelling and pain have gone.

Severe Otitis Externa

- In rare event of patient needing admission, criterion for ceasing IV antibiotics and discharging patient is:
  - Able to sleep a full night on the affected ear

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REMEMBER, DIABETICS..can get osteomyelitis of the ear canal just from syringing. Like all osteomyelitis needs months of treatment. Called ‘Malignant’ or Necrotising Otitis Externa

* Needs ENT Specialist and Gallium and Technetium nuclear med scans.

HINT: syringe with diluted Betadine

Fungal Otitis Externa

- Think fungal if ear is itchy.
  - Locacorten Vioform Drops Best.
  - Kenacomb are too thick for patients get in the ear. Finally, if in, they block ear for weeks.
  - Kenacomb ointment on a 1.25cm width gauze is good to pack ears, after swelling subsides.

Finally, if in, they block ear for weeks.

Fungal debris needs removal, by ENT, or by syringing (Dilute Betadine)

External Ear HINTS

- Hydrozole cream
  - Hydrocortisone and Canesten, for patient to apply whenever ears get itchy
  - Available over counter at Chemist
- Canesten Solution (yes, tinea drops) excellent as ear drops to keep ears lubricated and reduce wax accumulation. (not if perforation)

ACUTE MASTOIDITIS

- CHW 88 admissions in past 5 years
- 27 swabs taken
- 14 grew strep pneumoniae.
- 5 low Resistance
- 5 intermediate Resistance
- 4 high Resistance
- Only 1 H influenzae (was mixed with S aureus)
AOM / Acute Mastoiditis

- The bug which causes complications in acute ear infection is strep pneumoniae.
- Hit it hard with a Penicillin 90 mgm / kgm/24 hr
- MESSAGE: Rx worrying ears with High dose penicillin

Am Academy Pediatrics AOM Guidelines

- 1. Accurately diagnose AOM and differentiate it from OME, which requires different management.
- 2. Relieve pain, especially in the first 24 hours, with ibuprofen or acetaminophen.
- 3. Minimize antibiotic side effects by giving parents of select children the option of fighting the infection on their own for 48-72 hours, then starting antibiotics if they do not improve.

Am Academy Pediatrics AOM Guidelines

- 4. Prescribe initial antibiotics for children who are likely to benefit the most from treatment.
- 5. Encourage families to prevent AOM by reducing risk factors. For babies and infants these include breastfeeding for at least six months, avoiding “bottle propping,” and eliminating exposure to passive tobacco smoke.
- 6. If antibiotic treatment is agreed upon, the clinician should prescribe amoxicillin for most children.

‘Regular’ AOM

- First: Consider watching for 24 – 48 hours, then ............IF getting worse and unwell:
  - Under 2 yr : Augmentin / Amoxil
  - 2 yr and over : Amoxicillin
  - After penicillin, the next choice, say, if penicillin-allergy, is daylight.

AOM & Penicillin Allergy

- Cefaclor at least is tasty to children but is a feeble antibiotic.
- Cefuroxime, but is a tablet
- Macrolides induce resistance fast
- Ceftriaxone: v.good, but is an injection once daily for 1-3 days
- Clindamycin is excellent, but liquid no longer available

Am Academy Pediatrics AOM Guidelines if Penicillin allergy

- If symptoms not too bad:
  - Klacid  15 mgm/kg in 2 divided doses
  - Cefuroxime  30 mgm/kg in 2 divided doses
  - Septrin/Bactrim 6-10 mgm/kg Tri/prim in 2 div doses
  - If symptoms a worry:
    - Clindamycin 30 mgm/kg in three divided doses
    - Ceftriaxone 50 mgm/kg once daily
**Benefit of Pneumococcal Conjugate Vaccine on AOM**

- Reduced incidence of AOM by 6%
- Reduced office visits for AOM by 7.8%
- Reduced A/biotic scripts for AOM by 5.7%

**NOSES**

- Sinusitis
- Sinusitis vs. Facial pains

**Paediatric Sinusitis**

1. Peri-orbital Cellulitis: infants to teens
2. Fronto-ethmoid sinusitis: Peri-pubertal mainly boys

**Peri-orbital Cellulitis**: infants to teens

- Arises from Ethmoid usually.
- Organisms: S pneumoniae, S aureus
- Pre vs Post-septal
- Visual acuity is the concern
- Aggressive IV A/b +/- surgery

**Fronto-ethmoid sinusitis:** Peri-pubertal, mainly boys

- Special group
- Prone to 'anaerobic' strep infections (esp s. milleri)
- Intracerebral and bacterial embolic infections common
- Need aggressive IV A/b and full Sinus and Cerebral imaging + contrast

**Frontal Sinusitis**

- Complications, e.g. osteomyelitis still occur
- Remember Potts Puffy tumour
Thanks for listening

At Children’s Hospital Westmead
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ENT Clinical Nurse Specialist is
SUE TRAPANI
If she does not have the answer she can get it fast for
you.
My phone is 02 8850 6455