Research articles last 5 years- ENT

- Throats and tonsils

Tonsillectomy versus antibiotics in children for recurrent tonsillitis

Randomised controlled trial
(BMJ May 2007)

Tonsillectomy is more beneficial in people with severe symptoms while, in populations with a low incidence of tonsillitis, the modest benefit may be outweighed by the morbidity associated with the surgery.

As a suggestion- refer those with one of the following:
1-Recurrent infections of acute tonsillitis (5-7 episodes)characterized by fever, polyarthralgias, antibiotic use and medical assistance for a one-year-period.
2- Tonsillar hypertrophy causing swallowing, respiratory or phonological disorders.
3- Peritonsillar abscess.

Effectiveness of adenotonsillectomy in children with mild symptoms of throat infections or adenotonsillar hypertrophy

Open, randomised controlled trial
(BMJ 2004)

Outcome measures- were fever, quality of life scores and URTI's. Adenotonsillectomy has no major clinical benefits over watchful waiting in children with mild symptoms of throat infections or adenotonsillar hypertrophy.

Penicillin for acute sore throat in children

Randomised, double blind trial
(BMJ December 2003)

Penicillin treatment had no beneficial effect in children with sore throat on the average duration of symptoms. Penicillin may, however, reduce streptococcal sequelae.

Systematic review and meta-analysis of randomised controlled trials of gastro-oesophageal reflux interventions for chronic cough associated with gastro-oesophageal reflux

(BMJ Jan 2006)

Use of a proton pump inhibitor to treat cough associated with GORD has some effect in some adults (number needed to treat (NNT) was 5)
The effect, however, is less universal than suggested in consensus guidelines on chronic cough and its magnitude of effect is uncertain.

Treatment of Sore Throat

MEREC 2006

- 40% are better within 3 days
- 85% are better within 1 week regardless of the cause
- Grp A Beta Haemolytic strep carriage occurs in up to 40% of the population (so no point in doing swabs)

Do antibiotics work?

NNT is 3 – so you need to treat 3 people with sore throats to get a modest benefit in one by day 3.

CENTOR Criteria for Grp A Beta-haemolytic Strep:

- Tonsillar exudates
- Tender anterior cervical lymph nodes
- Absence of a cough
- History of a fever

3 out of 4 suggest bacterial infection with GABHS but sensitivity only 50% - i.e. some will be missed- but best guide we have as throat swabs not recommended.

Do Antibiotics prevent complications?

NNT: 71 to prevent Otitis Media
50 to prevent one Quinsy

Rheumatic fever and glomerulonephritis are extremely rare these days
So antibiotics not recommended to prevent complications.

- Noses and Sinuses

Are antibiotics effective for acute purulent rhinitis?

Systematic review and meta-analysis of 7 placebo controlled randomised trials.
(BMJ July 2006)

Antibiotics are probably effective for acute purulent rhinitis. (Research article in 2002 showed reduced mean duration of symptoms from 14 to 9 days). They can cause harm, usually in the form of gastrointestinal effects. Most patients will get better without antibiotics, supporting the current "no antibiotic as first line" advice.

Enzyme potentiated desensitisation in treatment of seasonal allergic rhinitis

Double blind randomised controlled study
(BMJ August 2003)
183 participants randomised to either injection with mixed inhaled allergen extract (pollen mixes for trees, grasses, and weeds; allergenic fungal spores; cat and dog danders; dust and storage mites) or placebo!
Both groups showed no differences in outcomes of symptoms.

Acute Sinusitis

MEREC 2006

Diagnosis can accurately be based on 4 or more of the following:

- Tooth ache from upper jaw
- Poor response to nasal congestants
- Coloured discharge
- Purulent nasal secretions
- Abnormal Transillumination

If symptoms present after 5-7 days the likelihood of bacterial sinusitis is increased **BUT** 90% of people with a cold have a degree of acute sinusitis and most settle in 2-3 weeks.

Probably 20 out of 100 people with acute sinusitis treated with antibiotics would show some benefit.

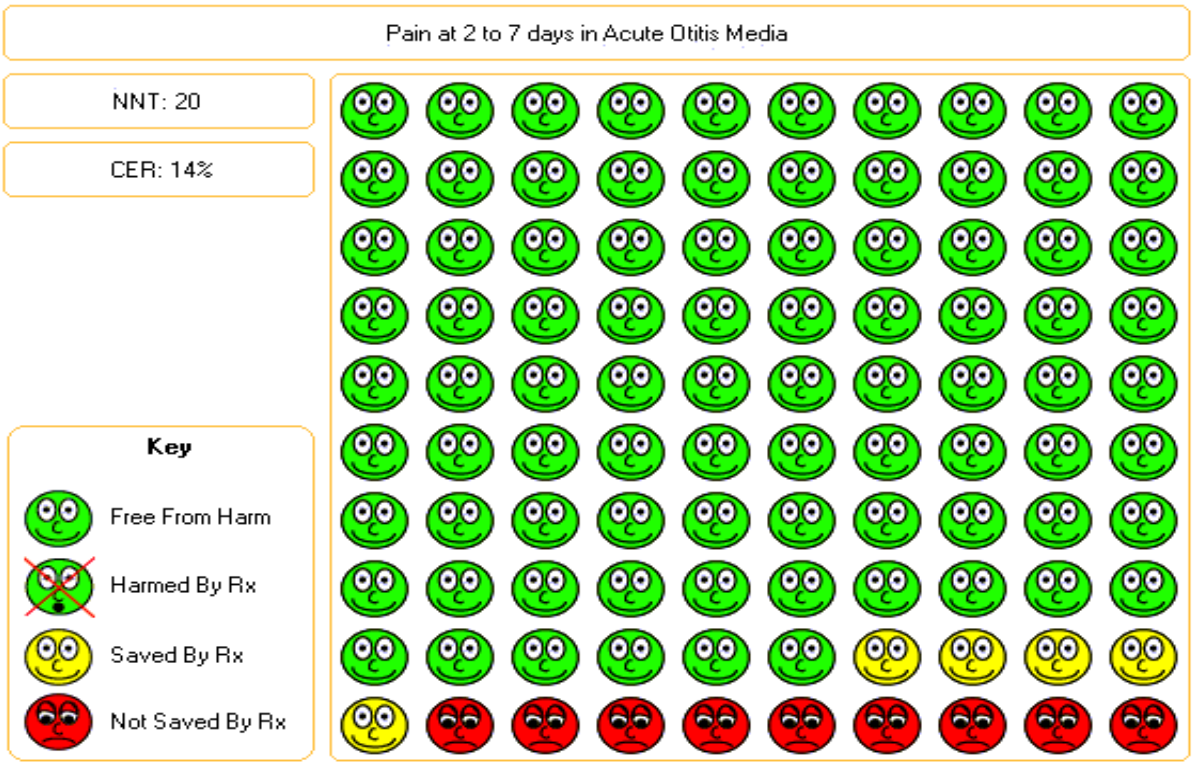
Amoxicillin or PenV recommended firstline (500mg tds in Adults) Doxycycline or Oxytetracycline are suitable alternatives in Adults only. Erythromycin is ineffective against haemophilus influenza which causes 21% of sinusitis.

- Ears

Treatment of Acute Otitis Media…Antibiotics or not?

(Taken from brilliant EBM webpage: www.nntonline.net/ebm/visualrx/exam.asp)

Cochrane Review Cochrane Library 1999 issue 4 (Outcome measure: pain)



Adenoidectomy versus chemoprophylaxis and placebo for recurrent acute otitis media in children aged under 2 years

Randomised controlled trial
(BMJ February 2004)

Adenoidectomy, as the first surgical treatment of children aged 10 to 24 months with recurrent acute otitis media, is not effective in preventing further episodes. Neither is Chemoprophylaxis.

Treatments for Chronic suppurative otitis media

(Best evidence)

Randomised controlled trials (RCTs) found limited evidence that topical quinolone antibiotics versus placebo improved otoscopic appearances. RCTs found no clear evidence of significant differences between topical antibiotics. No benefits from anything else.

- 80% of children get better by day 3 without antibiotics
- It is reasonable to prescribe analgesia.
- Antibiotics should not be used routinely and prescribing them just increases parental belief and re-attendance rates
- Use delayed scripts if necessary

Bell's Palsy NEJM 2007;357;1653-5, 1598-607

An RCT has just been published which looks at treatment of Bell's palsy with prednisolone and/or aciclovir.

But first a review of the condition itself…

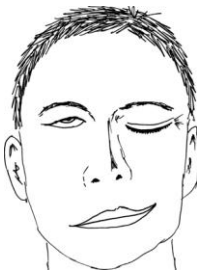
Bell's palsy statistics

Incidence 11-40/100 000/yr (which makes presentation in primary care quite common!)
Affects all ages and both sexes, but commonest between 30-45yrs of age.
Two thirds of cases are idiopathic.

How does it present?

Bell's palsy is facial (seventh) cranial nerve palsy.

It is a lower motor neurone condition (see below for symptoms– think CVA if UMN signs present).
It isn't Bell's if other cranial nerves are affected!



Asymmetry of mouth, unable to fully close eye

Classic symptoms include:

Mouth:	**Sagging of corner of mouth** (more obvious when asked to smile). This can result in dribbling and difficulty speaking if severe.
Alteration/loss of taste	in the front 2/3 of the tongue on affected side.
Eyes:	**Inability to close eye** on affected side (in UMN lesions this is preserved).
Dryness	or watering of affected eye.
Skin:	**Numbness** on affected side of face can occur.
Ears:	**Hyperacusis** (increased sensitivity to sound on affected side) can occur.
Asymmetry of mouth	

Underlying causes should be treated as appropriate. Diabetes and pregnancy (especially eclampsia) increase the risk of developing Bell's palsy.
Most (70-80%) get significant or full improvement in symptoms.
Mild cases tend to improve more quickly (often within 2w) but recovery can take 6m +.
20-30% may have permanent disfiguring facial weakness.
Standard treatments have included doing nothing, steroids and antivirals (zoster?).

The question is do any treatments improve the prognosis in idiopathic Bell's palsy? A new RCT from Scotland looked at the role of prednisolone and aciclovir in the resolution of Bell's palsy. The study was triggered by recent Cochrane reviews of each treatment which identified only 179 patients for a prednisolone review and 246 for a review of aciclovir use (Cochrane 2007, Issue 4).

Study design NEJM 2007;357;1598-607
A double blind RCT recruited 500+ patients (>16y) with (idiopathic) unilateral Bell's palsy within 72hrs of onset. Patients were recruited from primary care (hurray!). Patients were randomly allocated to aciclovir, prednisolone, both or placebo. Follow up was for 9 months. Analysis was by intention to treat. The main outcome measure was recovery of facial function but they also assessed quality of life, appearance and pain. There were no differences in these secondary outcome measures so I'll say no more about them.
Treatment doses were:
Prednisolone: 25mg bd for 10 days *(note they gave the pred bd!)*
Aciclovir: 400mg 5x daily for 10 days.

Results

Here I have outlined the full results…but if you just want conclusions and NNTs just jump to the next section (So what does this all mean?).

Complete recovery rates were:

	At 3 months	At 9 months
Prednisolone group	83%	94%
'Steroid' placebo group	64%	82%
Comment:	*Difference between the treatment & control group is statistically significant (p<0.001, CI 11.7-27.1)*	*Statistically significant (p<0.00 18.4)*

So what does all this mean?

The authors concluded that:

Prednisolone significantly improves outcomes at 3 and 9 months
Aciclovir does not add any significant benefit either alone or in combination with prednisolone.

That equates to:

NNT for prednisolone at 3m = 6 (CI 4-9) to get one additional complete recovery
NNT for prednisolone at 9m = 8 (CI 6-14) to get one additional complete recovery.

But remember…this applies only to those presenting within 72 hrs of onset and using 25mg bd of prednisolone for 10days.

Useful sites for patients

www.bellspalsy.org.uk contains useful information for patients, aud is a UK based organisation – it also includes a list of famous people who have had it (George Clooney, Pierce Brosnan!)
www.ninds.nih.gov/disorders/bells/bells.htm A slightly more sedate US site!

Take home messages: Bell's palsy

Bell's palsy is a seventh cranial nerve palsy
It is LMN – think CVA if UMN signs are present
It's not Bell's palsy if other cranial nerves are involved
Beware of recurrent or bilateral Bell's palsy, or patients presenting with systemic upset or a rash in the ear
70-80% will get completely or substantially better but this can take 6m or more
Milder presentations often get better more quickly (within 2w)
A new RCT shows that prednisolone significantly improves outcomes at 3m (NNT 6) and 9m (NNT 8) but that aciclovir did not improve outcomes.
Study conditions were presentation within 72 hrs and treatment was with 25mg prednisolone bd for 10d.
Whether treatment outside the 72hr window or with different doses of prednisolone are effective is not known.