Paediatric Pearls

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Previous editions are now all available at www.paediatricpearls.co.uk

Dehydration

From http://guidance.nice.org.uk/CG84/QuickRefGuide/pdf/English
(Diarrhoea and vomiting in children under 5 NICE guideline)

	No clinically detectable dehydration	Clinical dehydration	Clinical shock
SYMPTOMS	Appears well	⚑ Appears to be unwell	-
	Alert and responsive	⚑ Altered responsiveness	Decreased level of consciousness
	Normal urine output	Decreased urine output	-
	Skin colour unchanged	Skin colour unchanged	Pale or mottled
	Warm extremities	Warm extremities	Cold extremities
SIGNS	Eyes not sunken	⚑ Sunken eyes	
	Moist mucous membranes	Dry mucous membranes	
	Normal heart rate	⚑ Tachycardia	Tachycardia
	Normal breathing pattern	⚑ Tachypnoea	Tachypnoea
	Normal peripheral pulses	Normal peripheral pulses	Weak pulses
	Normal capillary refill time	Normal capillary refill time	Prolonged capillary refill time
	Normal skin turgor	⚑ Reduced skin turgor	-
	Normal blood pressure	Normal blood pressure	Hypotension

Please see our NICE-based guideline on the intranet for advice on what volume of oral or nasogastric fluids to be aiming for and what advice to give parents when going home.

⚑ denotes a child at increased risk of progression to shock.

This month's featured NICE guideline: ***Prescribing of antibiotics for self-limiting respiratory tract infections in adults and children in primary care*** *(http://guidance.nice.org.uk/CG69/Guidance publ 2008)*

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The term "respiratory tract infection" (RTI) is taken to mean any infectious diseases of the upper or lower respiratory tract. They account for 60% of all antibiotic prescribing in general practice. This guideline covers children treated in walk-in centres and the emergency department as well as GP surgeries.

It covers children >3 months and adults with a history suggestive of:

- Acute otitis media
- Acute tonsillitis
- Common cold
- Acute rhinosinusitis
- Acute cough

3 antibiotic prescribing strategies are described in a simple to use care pathway: http://www.nice.org.uk/nicemedia/live/12015/41322/41322.pdf

1) NO ANTIBIOTICS:

Give reassurance that they are not needed immediately and may have unwanted side effects. Offer clinical review if condition worsens.

2) DELAYED ANTIBIOTICS:

Give advice on when and how to use the prescribed medication. Advise to re-consult if symptoms worsen despite using the medication.

3) IMMEDIATE ANTIBIOTICS:

Only give if the patient is systemically unwell, has signs or symptoms suggestive of complications (eg. pneumonia, mastoiditis) or has pre-existing comorbidity (eg. immunosuppression, cystic fibrosis, ex-prem)

All the listed pathologies above should go into the "no" or "delayed" groups unless they fall into one of the following subgroups when there is an argument for giving the patient "immediate" antibiotics:

- bilateral acute otitis media in under 2s
- acute otitis media with otorrhoea in children
- acute sore throat if 3 or more of the Centor criteria (tonsillar exudate, tender cervical lymphadenopathy, fever, absence of cough) are present

People in the "delayed" or "no" antibiotics groups should be advised about the average total length of their illness as listed below and should be advised about managing symptoms including fever (see www.nice.org/CG47 for children <5).

Acute otitis media	4 days
Acute tonsillitis	7 days
Common cold	10 days
Acute rhinosinusitis	2.5 weeks
Acute cough	3 weeks

2 studies **from the literature** backing up the paediatricians' view that too many chest x-rays are still being requested for children in the Emergency Department....

This was a prospective observational study of 2071 children, 21 years or younger, presenting to the Paediatric ED and having a CXR for suspected pneumonia. X-ray findings were compared with physicians' clinical assessments. With some overestimation, physicians' assessment of the likelihood of pneumonia correlates well with radiographic diagnosis of pneumonia. Neuman et al. Physician Assessment of the Likelihood of Pneumonia in a Pediatric Emergency Department. Pediatr Emerg Care 2010;**26**(11):817-22. Abstract available at http://www.ncbi.nlm.nih.gov/pubmed/20944506

Among afebrile children (temperature of >38°C) with wheezing, the rate of pneumonia was very low (2.2% [95% CI: 1.0-4.7]).The routine use of chest radiography for children with wheezing but without fever should be discouraged. Pediatrics 2009;124:e29-e36. Full text at http://pubget.com/paper/19564266

Think: will it change my management?

Lots more on paediatric respiratory issues at www.paediatricpearls.co.uk

Acute management of seizures

Status epilepticus = a seizure lasting for 30 minutes or more, or a period of 30 minutes or more with the child going in and out of seizures and not regaining consciousness in between. Most of the children brought to resus still fitting are in status epilepticus and the APLS based guideline displayed in the wall folder in resus will be used to manage the child by the paediatricians who should always be called if the patient is less than 16 years old.

Some children start to have a seizure while in the emergency department. Many of these are febrile convulsions. Emergency management of these children is:

A (airway) **turn on side, apply high flow oxygen, suction if necessary**

By all means continue to assess the child as per APLS guidelines and it certainly helps to time the fit but please don't rush to treat them with benzodiazepines. The vast majority will stop fitting of their own accord in less than 5 minutes, probably less than 2. Most children still fitting after 5 minutes will *not* come out of it themselves and this is the time to use buccal midazolam, doses as per the status epilepticus guideline, and call the paediatricians if we are not already there.