Paediatric Pearls

by Dr Julia Thomson, Paediatrician

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Monthly paediatric update newsletter for all health professionals working with children – put together by Dr Julia Thomson, Paediatric Consultant at Homerton University Hospital, London, UK. Housed at www.paediatricpearls.co.uk where comments and requests are welcome!

What are we going to do in September when children start getting their usual run of winter feverish illnesses? Across the country, the health service is trying to get to grips with this issue and the RCPCH-endorsed **Wessex Healthier Together** initiative is ahead of the game.

https://what0-18.nhs.uk/ has some fantastic resources for health professionals (https://what0-18.nhs.uk/professionals/gp-primary-care-staff) including a very helpful section on remote assessment (https://demo.what0-18.nhs.uk/professionals/gp-primary-care-staff/clinical-pathways-remote-assessment). The section for parents (https://demo.what0-18.nhs.uk/professionals/hospital-staff/safety-netting-documents-parents) houses traffic light based parent information leaflets which can be translated into any number of languages and the link texted to your patient's parents directly from the site. Unfortunately, even if you have translated the leaflet into Somali for the family, it turns back into English when texted or when made into a PDF which is my only disappointment so far.

The video Tips, Tools and Templates for Remote Paediatric Consulting (https://www.youtube.com/watch?v=L1dVWqR_mVI&feature=youtu.be) and the training video for remote assessment (https://www.youtube.com/playlist?list=PLhD910OQRr6bWVrDDkbl6jn21mtInvPDj) are invaluable for all of us who face having to do much of our acute work by video link this coming winter.

Surgical Paediatric Pearls: TIGHT FORESKIN

(with thanks to Mr D Misra, Consultant Paediatric General and Urology Surgeon, Barts Health NHS Trust)

- The foreskin being too tight to be pulled back over the glans is called phimosis and is normal in boys up to the age of about 6 years.
- The foreskin starts to separate from the glans around the age of 2. It should never be forced back.
- If the child is getting recurrent balanitis (inflammation of the head of the penis) or balanoposthitis (inflammation of both glans and foreskin), try washing with water or an emollient and applying hydrocortisone cream or ointment to soften the foreskin
- Paraphimosis is where the foreskin is retracted and can't be returned to its original position. It tends to happen in older boys and men who have always had a tight foreskin. Circumcision may be recommended in these cases.

Mr Misra's recommended management by age:

0-3 years	do nothing or hydrocortisone if recurrent balanitis
3-6 years	as above, consider circumcision if balanitis uncontrolled
> 6 years	can try hydrocortisone but > 50% will need circumcision

For parents/patients:
https://www.nhs.uk/conditions/phimosis/
https://www.baus.org.uk/patients/conditions/13/tight_foreskin_phimosis/

JOURNAL CLUB:

Dr Chrissie Bolton has been running some excellent in-house journal clubs for us and has agreed to organise the presenting teams to summarise the main discussion points and the learning for this next "From the Literature" series for Paediatric Pearls.

Clinical vignette: 5-week-old with fever and vomiting. Nitrites and leucocytes on urine dip. Would you do a lumbar puncture (LP)?

Clinical question: what is the risk of bacterial meningitis in 5 week old infants with a urinary tract infection?

Approach: Systematic review of 21 studies, including prospective and retrospective studies, the largest of which had 1190 babies included who had a UTI and fever.

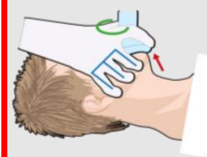
PICO: They looked at infants aged 1-3 months, with urinalysis or urine dip indicative of a UTI. They identified how many undergoing a lumbar puncture were given a diagnosis of bacterial meningitis.

Conclusions: **Pooled prevalence of meningitis in babies with a UTI was 0.25% (2.5 in 1000), which was similar to the baseline risk in the general population of 0.3% (3 in 1000)** suggesting the rates are not higher because of an infection of the urinary tract. Results were similar when they analysed those with a urine dip compared to a positive urinalysis or if small studies were excluded.

Team discussion was lively and hinged on whether the infants studied were sufficiently similar to the patient in the clinical vignette. Also, on the perceived likelihood of meningitis before the test (LP) and afterwards. Perception within the team was very varied.

Learning points: Consideration is needed as to whether all babies of this age need to be investigated for meningitis if they have a UTI +/- fever.

LESSONS FROM THE FRONT LINE



"Position, pressure, pull"

But what if you can't expand the lungs with a bag valve mask? What if you can't intubate, can't ventilate?

We were in this position recently with a 14 month old with croup. The outcome was good but the process prompted registrars, Drs Paul Goley and Laura Bolton, to look at the Difficult Airway Society's paediatric guidelines available from https://das.uk.com/guidelines/paediatric-difficult-airway-guidelines.

In comparison to adults, children are obligate nasal breathers with a large occiput, tongue and epiglottis, and a funnel shaped larynx and trachea. They are by default a "difficult airway". Key points:

1. always use a two-person bag valve mask technique (ensuring that you pull the jaw up into the mask, rather than pushing the mask down onto the face)
2. call for help as soon as possible, ideally from the most experienced anaesthetist available
3. Use a checklist eg. Children's Acute Transport Service Intubation Checklist - http://cats.nhs.uk/wp-content/uploads/emergencyintubationchecklist.pdf
4. read the Difficult Airway Society's (DAS) excellent guidelines
   a. Difficult Mask Ventilation
   b. Unanticipated Difficult Tracheal Intubation
   c. Cannot Intubate, Cannot Ventilate

- **Plan A:** INTUBATION - not more than 4 attempts, ensuring adequate muscle relaxation, correct position, correct blade and size, and external laryngeal manipulation +/- bougie.
- **Plan B:** SUPRAGLOTTIC DEVICE (aka LMA) - not more than 3 attempts.
- **Plan C:** BAG VALVE MASK VENTILATION - correct position +/- oro/nasopharyngeal airway, an NGT to reduce gastric distension and consideration of reversal of muscle relaxation.
- **Plan D:** "CANNOT INTUBATE, CANNOT VENTILATE" - call ENT for immediate surgical tracheostomy, or attempt front of neck access through cannula cricothyroidotomy.

Full text paper: Risk of Meningitis in Infants Aged 29 to 90 Days with Urinary Tract Infection: A Systematic Review and Meta-Analysis. Nugent J, Childers M, Singh-Miller N, Howard R, Allard R, Eberly M. *J Pediatr*. 2019;212:102-110.e5. doi:10.1016/j.jpeds.2019.04.053