Paediatric Pearls

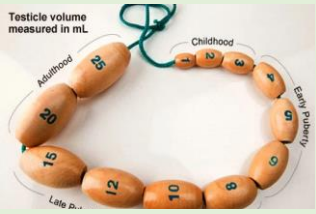
by Dr Julia Thomson, Paediatrician

May 2021

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 to do when you can't find an orchidometer

by Dr Mojgan Ezzati, paediatric consultant at Homerton, who recently presented a very helpful, practical synopsis of precocious puberty.

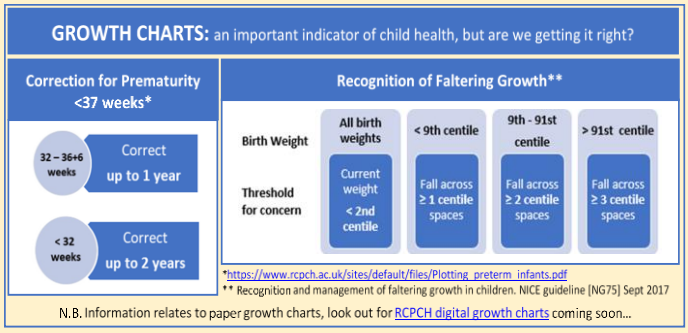


length 2.5cm = 4mls = early puberty

Testicular volume calculator available at http://tvcalculator.nchri.org/. Measure the width of the testis (cm) and assess the Tanner stage of genital development. Plug both these into the online calculator to get the volume in mls. Width of 1.8cm during Tanner stage 2 = 3.95mls.

Tanner stage 1: *pre-puberty* testes < 2.5cm long or < 4mls testicular volume (*tv*)
Tanner stage 2-3: *in puberty* abnormal if < 9 years of age in boys – **REFER**
NB: 40-65% of males in this stage have temporary breast tissue growth = NORMAL
Tanner stage 4-5: *completing puberty* boy's peak growth velocity is at *tv* 9-10mls
Click here for a useful Aide Memoire to pubertal staging and indications for referral to secondary care in both boys and girls.
Recommended full text resource: Bradley, Stephen & Lawrence, Neil & Steele, Caroline & Mohamed, Zainaba. (2020). Precocious puberty. BMJ. 368. l6597. 10.1136/bmj.l6597.

I was not the only paediatric consultant in a recent departmental teaching session not to know that, when plotting children on growth charts, we should correct differently for prematurity in babies < 32 weeks gestation and the cohort born between 32 and 36+6 weeks. Dr Katie Ruck, paediatric registrar, contacted the RCPCH for clarification and then put together this helpful aide memoire which is also on the Primary Care Resources page of the website:



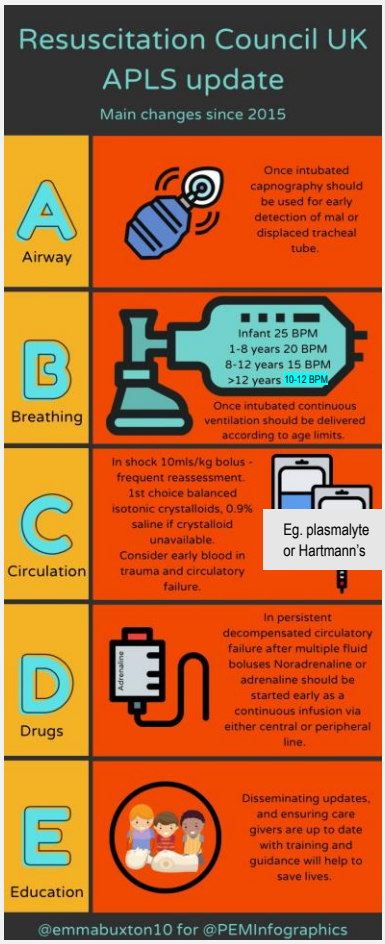
Resuscitation Council UK

.... published updated neonatal, basic (PBLS) and advanced (PALS) paediatric life support guidelines in May 2021.

IMPORTANT DOWNLOADS:

Paediatric ALS Algorithm 2021
Paediatric Cardiac Arrhythmias Algorithm 2021
Paediatric Emergency Drug Chart
Newborn Life Support Algorithm 2021

MAIN CHANGES IN RED BELOW:



https://www.peminfographics.com/

- perform assessment for signs of life (circulation) simultaneously with breathing assessment
- use speaker function on mobile phone to call emergency services and receive instructions

- More on end tidal CO_2 monitoring at https://www.resus.org.uk/library/2021-resuscitation-guidelines/paediatric-advanced-life-support-guidelines
- Keep the patient flat, maintain an open airway by either continued head tilt and chin lift or jaw thrust. Once breathing but still unconscious, try the recovery position if there is a risk of vomiting.

- 2-person bag-mask ventilation (BMV) is best, followed by early supraglottic airway or cuffed tracheal tube. Note BPM by age once child intubated with uninterrupted chest compressions.
- titrate O_2 to SpO_2 of 94-98% in seriously unwell or injured children and post cardiac arrest with return of spontaneous circulation (ROSC).

- don't waste time verifying the absence of a pulse; if no signs of life, start chest compressions immediately after 5 rescue breaths.
- chest compression depth at least one third the anterior-posterior diameter of the chest, or by 4 cm for the infant and 5 cm for the child.
- Minimise pauses so that chest compressions make up at least 80% of CPR cycle.
- adrenaline within 3 minutes of identification of non-shockable cardiac arrest. Early IO access.
- Lidocaine 1mg kg -1 can be used in shockable side of algorithm instead of amiodarone by "providers competent in its use"
- note fluid bolus volume and type changes
- note inotrope type, route and timing changes

- Note changes to SVT algorithm in linked download above. Modified adenosine doses, early shock recommended if decompensated with IM or intranasal ketamine for sedation.

The Faculty of Forensic & Legal Medicine of the Royal College of Physicians

Raising standards in forensic and legal medicine; protecting vulnerable people

With thanks to Dr Emma Parish, consultant paediatrician, Children and Adolescent Services, Evelina Hospital

What to think about:

Permission is needed from the parent and young person for photographs or screenshots to be taken/shared. Best practice is to complete a consent form – you can use this one from the Faculty of Forensic and Legal Medicine (FFLM) consent form re photos in clinical online consultations.

Think about how images are safely shared with you. Do you/your team have an online system or secure email that can be used? This is always preferred to personal devices or email.

Do you have appropriate storage of images once shared? Can they be directly linked to patient record and shared with as few people as possible in the process?

Photographs and images in virtual consultations:

It can be tempting within the context of face-to-face appointments being limited to rely on digital images, recordings and screenshots to aid diagnosis. While it can be extremely helpful to take photos, for example of rashes, burns or birthmarks, and videos of unusual movements or suspected seizures, there has been evolving discussion and guidance about the ethics of receiving and storing images of this type in children and young people.

Limitation of images – images do not always reflect what would be seen on physical examination. If you are assessing something using an image there will be limitations on what you can appreciate. With this in mind do you need a face-to-face appointment or clinical photography to be arranged?

Bruising or other skin changes of significance in safeguarding should have clinical or forensic photography and face to face assessment (https://childprotection.rcpch.ac.uk/resources/service-delivery-standards/).

Parents or young people should not routinely be asked to take photographs which would be considered intimate images (genitals, anus, perineum, breasts).

CYP and their parents should not feel pressure to take or share images online. They should know that by not providing an image their clinical care will not be affected.

More information can be found here: RCPCH guidance for professionals on having good online appointments.