Bangor ED goes to SMACC-Mini

A technical update v1.2 - Jun 2016

BOG BLOG: CPD whilst having a wee!

The main SMACC (Social Media & Critical Care) conference is, as the title suggests, very well covered online: just search for the hashtag "smaccDUB" on Twitter to see what it's all about. However, the pre-conference workshops were much smaller. Here's our take-home messages from the Paediatric EM session, SMACC-MINI. The format was unusual - 8-min presentations at lightning speed for a whole morning, so lots of soundbites!

Last year's paeds resus updates

- Oxygen - high flow till ROSC then target sats of 95-98%
- Chest compressions are one-third of chest depth
- Kids can have cuffed ET tube from 12 months of age upwards
- Post-delivery, delay cord clamping by 60 seconds (assuming no immediate resus required)
- Balanced crystalloid, 20ml/kg

Neonatal resus: assisting the transition to extra-uterine life

- Poorly neonates will try to revert to fetal physiology and need help transitioning to extra-uterine plumbing!… start with adding PEEP to the initial (room-air) inflation breaths. Pulmonary blood flow increases hugely once ventilation establishes, bringing the circulation with it.
- Forget palpating a pulse - use ECG leads. If you need to do chest compressions, intubate first (crank up oxygen) & use hand encircling technique, 3:1. Be aware that clamping the cord drops cardiac output.
- Sats probe on the *right* hand - pre-ductal. Fetal sats are only about 60%, and take a while to rise: by 10 mins, a term baby should have sats of 90% and a premie, 80%. That's OK.
- Declare death at 10 minutes if there's been no heart rate & no breathing.
- Don't actively treat if under 400g or 23 weeks.

Snippets!

AVPU related to GCS: a child responding to verbal stimuli always has a GCS of more than 8.

Paediatric difficult airway: go straight to video laryngoscopy. Only 3% first-pass success with DL. Look at the "frontal plane-to-chin" distance to help assess risk of a difficult airway.

In vulnerable families (e.g. poor, single parent etc) if a child in the family has a hospital admission, there's an association with "over-use" of the ED in the next 12 months. What support are we offering?

Pneumonia in kids: ultrasound is more sensitive than clinical examination or CXR ("liver in lung" appearance or air bronchogram are diagnostic) and small pleural effusions on US are usual in pneumonia. Not a cause for concern in most UK practice (but need follow up in TB regions)

Umbilical access: you need primed line, scissors, and a tie. Stick it in the big bleeding hole, max 5cm, and hold on! Time to adrenaline matters.

Tricky intubation? Pad under shoulder, jaw thrust & *you* crouch down

Paediatric Surgery Pearls…

- Constipation is not what you poo, it's what you don't poo: 40% of kids are constipated. It's the cause of a lot of paediatric abdominal pain, including that presenting to ED. Treat if any suspicion (may take months), e.g. pain on pooping. Give Bristol Stool Chart
- Constipation can cause detrusor instability in girls (poop presses on bladder) and it's a cause of AP.
- The abdomen can't be both rigid & rebounding!
- Surgeons cannot "exclude appendicitis"
- Rectal prolapse? Pop it back in, treat the constipation
- Umbilical hernia: if you can stick your finger into the hernia, there's no gut stuck. Rarely cause acute mischief.
- Bile-stained vomit (green, not yellow) - refer urgently
- 1 in 5000 live births don't have normal bowel plumbing: check there is a normal anus present!

Medically complicated kids

Mitochondrial diseases	Any physiological stress can cause metabolic havoc
Down's Syndrome	Caution with sedation
Muscular dystrophy	Heart may be affected: caution with sedation
Obstructive Sleep Apnoea	Caution with sedation
Kids with shunts	Where's it plumbed to? VP, to pleura, or atria?
Vagus nerve stimulator	Looks like a wristwatch, use it to stop seizures
Ventricular Assist Device	Should sound quiet and the box be at room temp. If it gets hot, may be a clot in it.

Thanks to all the speakers in SMACC-Mini, there's simply no space to list all 20 presentations here but check out smacc.net.au

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