Newborn presentations

References:
1. gppaedstips.blogspot.com
2. ebeye.ophth.uiowa.edu
3. NICE guidelines NG1
4. eln.nutricia.co.uk
5. Childhood health care course New Cross Hospital Oct 2017

Abnormal head shapes

- Anterior fontanelle have enormous normal variation. ranges 0.6-3.6cm.
- Median time of closure 14/12, but 1% close at 3/12, 38% by 1yr, 96% by 2yr.
- Bulging = think ↑ ICP.
- Sunken = think dehydration.

Plagiocephaly

- Due to effect of pressure when lying flat, on a compliant skull.
- No long term deficit occurs.

Symptoms
- Abnormally shaped head.

Investigations
- HC.
- Ridged suture and a misshaped or small fontanelle.

when to measure
- Head circumference (HC) is a more reliable growth parameter than length in babies.
- Need to ensure you r/o more serious pathology.

- Craniosynostosis

- Noticeably large or small head.
- Growth problems.
- Feeding problems.
- Vomiting.
- Symptoms or event with a possible neurological cause e.g. BRUE.
- Developmental concerns or impairment.
- Asymetrical head shape.
- Any congenital abnormality.

- Often HC outside of the 98th or 2nd centile is constitutional i.e. genetic, not pathological.
- Similar where people are taller or shorter, some people have bigger or smaller heads.
- There should be no other abnormality and the measurement usually closely follows a centile line.

- Great Ormond Street Hospital criteria of abnormalities:
- If indicates excessive or limited growth.
- Abnormal shape or size e.g. measurement falls outside 99.6th or 0.4th centile on the chart.
- Head circumference >2 centile lines above or below their height or length measurement.

HIGH HEAD CIRCUMFERENCE
- Hydrocephalus
- Chromosomal abnormality
- Brain tumour
- Bone abnormality

LOW HEAD CIRCUMFERENCE
- Chromosomal abnormality
- In-utero hypoxia, infection or toxins
- Craniosynostosis
- Severe malnutrition

Management
- If no credible pathology, we should do as much nothing as possible.
- Avoid unnecessary tests and treatments.
- Remember the baby is your pt.
- Don't do anything to them that does not stand to benefit them directly.
- PIL to parents i.e. tips on positioning.

Sticky eye

Blocked tear duct
- While the temptation is to presume that sticky eyes are due to infection, this is rarely the case in newborns.
- Commonly it's a blocked tear duct.
- Many are born with a non-patent nasolacrimal duct.
- Tears are made up mainly of water and lipid (for lubrication).
- The water mostly evaporates leading to a thick secretion which accumulates.
- This is not a sign of an infection.

- Well baby.
- Feeding well.
- Normal systemic examination.
- Conjunctiva not red.
- No eye lid or periorbital redness and swelling.

- Do not do an unnecessary test (swab) or give unecessary Abx.

- - If the problem is a blocked tear duct, Abx eye drops may cause a chemical conjunctivitis and make things worse.
- Most blocked tear ducts will self-resolve over weeks or months.
- Unusual to persist until 1y.
- If it does refer to ophthalmologist to unblock with a probe.

Dacrocystoceles
- Variant of narrow tear duct.
- Usually by 7 days old.

- Bluish, cystic, firm mass inferior to the medial canthus.
- Usually unilateral.

- Refer to ophthalmologist.

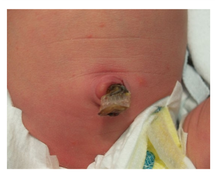
Opthalmia Neonatorum
- Conjunctivitis occurring within the first month of life.
- Bacterial (Chlamydia or gonorhoea) or viral (HSV, adenovirus or enterovirus).
- Babies have maternal antibodies to protect them from common viral infections, so viral conjunctivitis is relatively rare in newborns.
- Their immune system is immature and relatively unresponsive so body does not put up much of a systemic effect e.g. lack of fever.

- Baby unwell.
- Conjunctiva red.
- Eye lid and/or periorbital redness and swelling.
- Profuse discharge.

- STAT referral to paediatrics.

Umbilical stump

Image from:
Stanford Newborn Nursery, Janelle Aby MD



Normal
- If the umbilical stump is still attached is non-infective inflammation.
- From birth the umbilical stump is devitalised tissue.
- In the absence of a blood supply, it goes through a process that leads to separation, usually at 1-2/52.
- During this time it can either just become dry and shrivelled or it can become a bit sticky and smelly.
- Often, the skin around the base has been repeatedly cleaned to remove any stickiness. This itself can cause a small halo of red skin.

- Well baby.
- Feeding well.
- Normal systemic examination.
- Small margin or erythema around umbilicus.
- < 2/52 old.
- May have granuloma.

- Benign growths after stump falls off.
- Common and will self resolve.
- Can produce some exudate.
- Repeated cleaning can cause inflammation to the surrounding skin.

- Leave alone.
- No Abx required.
- Monitor for baby becoming unwell or spreading erythema.

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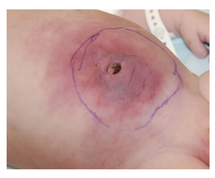

Infection (omphalitis)
- Rare in developed countries.
- Bacterial infection as newborn has unresponsive immune system and umbilical vein inside can seed the infection systemically.

- Risk factors:
- Maternal perinatal infection.
- PROM.
- Low birth wt.
- Delivery on unclean surroundings.

- STAT referral to paediatrics.

Colic

- "Is diagnosed in countless numbers of babies every day.
- Advice is given and treatments sometimes prescribed.
- All of it is nonsense from start to finish".
- Paediatric consultant, Dr Edward Snelson.

Colic is not a diagnosis
- So basically you mean crying a lot.
- And who said it's abnormal to cry 3hrs/day for > 3/7 per week, for > 3/52?
- What if it's 2 hrs for 4/7 per week. Does that count?

It implies you rules out other pathology

Acute causes:
Meningitis
Osteomyelitis
Hair tourniquet
Injury (accidental and non-accidental)

Chronic causes:
Gastro-oesophageal reflux disease
Non-IgE allergy (usually CMPA)
Urinary tract infection
Non-accidental injury

Colic is not treatable
- Nothing has been proven to work.
- Also if you suggest treatment and it doesn't work, the parent get's more anxious and depressed that they are failing.
- Better to be honest:
- Some babies cry a lot of the time.
- If we are confident that there is no disease causing the crying we sometimes say it is colic.
- No one has found out what causes it.
- Which is why there is no treatment for it.
- One of the theories is that it is the baby getting used to the sensations of their bowels.
- So if you are giving them all their needs (food, warmth, clean nappy holding) then it is ok to let them cry.
- You do not have to stop the baby from crying.
- It is not harmful or damaging to the baby.

Reflux

Pyloric stenosis
- Up to 2/12.

Gastrooesophageal reflux (GOR)
- Posetting/reflux/regurgitation even if multiple times and large but not causing problem for the baby.
- Unlike vomiting the expulsion is passive, effortless and non-projectile.
- Mom having to change clothes all day long is not a disease.
- Very common and a normal physiological phenomenon.
- Due to weak lower oesophageal sphincter .
- 3 in 10 children under 1yr of age suffer with it.
- Usually resolves by 12-14/12..

- Does not need investigation or treatment.
- Just needs reassurance and lifestyle advice.
- Can occur > 6 x per day in 5%.
- Resolves in 90% by 1yr age.

- Reduce feed volume if excessive for weight 150ml/kg/day if < 3/12, and 120ml/kg/day if ? 3/12.
- Smaller feeds, more often.
- Burp before during and after feeding.
- Smaller bottle teat to avoid too much feed being swallowed.
- Sit upright after feed for at least 30min.
- If you go onto thickener's below, remember may fail and cause constipation. Try to avoid.

Thickened milk
- pre-thickened formula → - SMA Staydown. - C&G Anti-reflux. - Aptamil Anti-Reflux. - Enfamil AR.
- add on thickener → - C&G Instant Carobel. → - Is mixed with the current feed. ???- In breastfeeding, can add to expressed milk, to make a paste given on a spoon and then breast feed as normal.???

if fails

Medications
- Stop any thickened milk.
- 2/52 trial of gaviscon infant.

IF FAILS
- 4/52 trial of omeprazole or ranitidine poor evidence it works as it's not an acid reflux issue usually.

Breast feeding:
- Mix with 5 ml of boiled cooled water to make a smooth paste.
- Add another 10 ml of boiled cooled water, and mix.
- Part way through the feed use a spoon or feeding bottle to give the dose.

Weaning:
- At the end of each meal using a spoon or feeding bottle.

if fails
- Refer to paediatrics.

Gastrooesophageal reflux disease (GORD)
- When the reflux of gastric contents causes troublesome symptoms and/or complications.
- Marked and persistent distrewss.
- Oesophagitis.
- Pulmonary aspiration.

- Most are symptomatic due to reflux of milk, rather than acid reflux.
- Hence why poor evidence for using ranitidine and PPI.
- Main treatment is to avoid over feeding and use thickener.

- Childhood healthcare New Cross Hosp Oct 2017 Reflux you should treat if medial compromise = chest infections, blue episodes, failure to thrive. All else = if family stresses treat. Not happy parents is not good for baby too !

1st line gaviscon, Can store breastmilk with gaviscon in fridge for 4 hrs.
If fails ranitidine. 1-3mg/kg. Dose depends on the pH of the acid coming up.
Can just use cow and gate anti reflux which has gaviscon in already.

???any concerns about ranitidine to scare parents from demanign it.
Ranitidine has high alcohol content.
If not improved with ranitidine then refer.
We can use omeprazole if needed.

Rflux has big pharmaceutical beenfit !

Pyloric stenosis = peaks at 6 weeks, but can present around term in preterm babies.
Proper prjectile vomitng will not coer the baby. So ask if baby is covered = if yes, then its not projectile.

Constipation

- Normal not to open bowels for a few days in first few weeks of life.

- No need for medication.

Sleep myoclunus

- Normal phenomenon at all ages.
- Only during sleep.
- Eyes closed.
- Is not a seizure.
- Partly due to the protective reflexes that they are born with such as the moro reflex.

- No treatment.