Academy of PHYSICAL MEDICINE

Broadcast Summary

Infantile Colic

With Clive Hayden DO, MSc

First broadcast on 17th December 2014

Reference:

Understanding Infant Colic (28 pages) – available from Clive at Churchdown Osteopaths: http://www.churchdownosteopaths.co.uk/books/

- Who treats colicky infants? – Almost certainly anyone who treats babies.
- How easy is it?
- Predictability? It's a constant challenge. Very stressful for parents: babies can cry for up to 8 hours at a time.
- Conventional help:
  - Many midwives/health visitors are interested in what osteopathy offers
  - Advice is often quite random
  - Colic is an umbrella term, so possible remedies tried until one might work
- Having a thorough understanding of condition helps provide a rationale for determining a likely solution

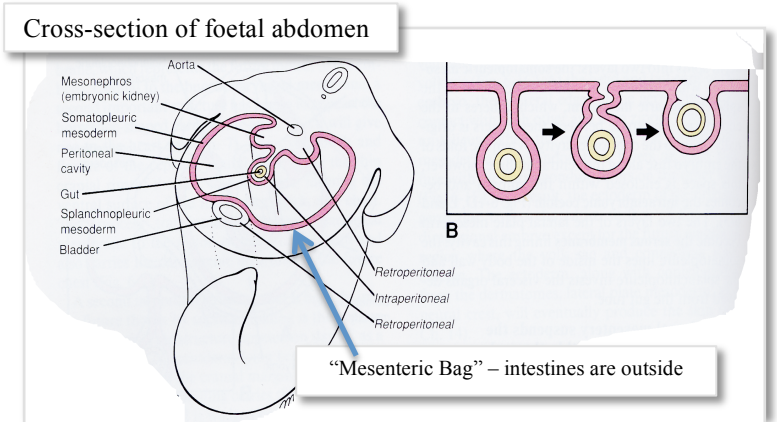
About Colic

- The irritable, farty, sicky, thriving/not thriving infant but usually normal weight gain, so not a pathology, nor a medical emergency. Assumption is that it will clear up at 3 months – evidence suggests otherwise
- Study in 1993 (Hyde & Guyer), assessed 1000 infants, less than 50% cleared up at 3 months, further 41% by 6 months. Only 21% had symptoms in evening, contrary to beliefs.
- Affected children threaten to explode from mouth or anus – vomiting and defaecation are both useful diagnostic indicators
- Cries on or after feeding and capable of crying non-stop for many hours.

Embryology

Development of the mesentery:

- Gut forms from the dorsal



mesentery

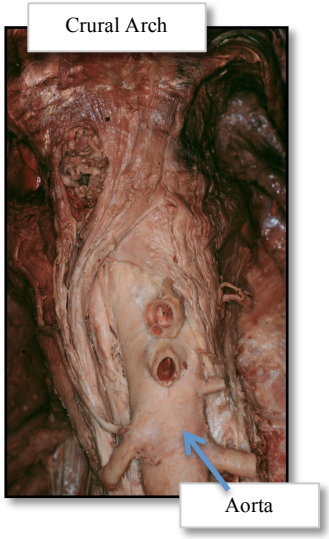
- Gut tube is present before septum transversum
- Gut is effectively hanging from posterior wall of abdomen
- Current advice is that babies should lie on their back – can cause gut to occlude blood vessels which serve it. Colicky babies often better on their side or on their front when supervised.

Reflux (Gastro-Oesophageal Reflux)

Not technically a colic problem, but is a differential and is treatable osteopathically. Can cause burns of the oesophagus

Diagnosis:

- Usually pain on feeding or within 20 minutes, often with posseting
- Babies may pull away from the breast or bottle (mother may feel rejected), but baby may be getting gastric acid burns.
- Will ease after weaning, but may persist to adulthood.
- Watch for the grimace



Factors:

- Positional – babies should be held more upright
- Beware overfeeding – try little and often.
- Consider - thorax, diaphragm, nuchal cord, pelvis etc
- Infant gaviscon?

MALT (Mucosa-Associated Lymphoid Tissue) response: irritation to one part of system irritates others – therefore hoarseness or cough can accompany reflux

- Mismatch of 2 parts of diaphragm caused by:
  - Thoracic twists and strains from labour tensions from abdomen, pelvis, lower extremity
  - Caesarean births - unequal filling of lungs, extraction techniques. Caesarean babies 3-4 times more likely to be asthmatic (not necessarily asthma – may simply be not using lungs well enough – Caesarean delivery may not have provided the stimulus for lungs to open properly)

- Incompetent cardiac sphincter of stomach (formed by right crus of diaphragm)

True Colic

A non-pathological condition

- Variable onset
- Peak incidence at 6-7 weeks
- Not necessarily a 3 month or evening condition
- Lactose and some milk proteins may affect (most talk is re lactose)

The irritable gut

- No chance for digestion to work – gut working too quickly

- Not long enough exposure to lactase enzyme – ferments and expands in gut.
- Explosively flatulent
- Symptoms develop 30 (severe)-75 (less severe) mins after feed
- Expanding gut = pain
- Stress a factor
- Treat generalised moulding (the result of labour)
- Stress can be a factor (proven association = antenatal and postnatal (domestic) stress). Stress makes the gut more active. An important factor in case history – employment stress etc

- Treatment
    - aim to relieve gut congestion

Case History Can Include:

- Complete breakdown of labour
- Histroy of pregnancy
- Pre-conceptual issues (IVF)

Clinical Procedure

- Babies are undressed to nappy for initial examination
- Keep clothed therafter for warmth

Lactose Intolerance

If no other issues gut empties to lower intestine in about 2 hours. If secreting insufficient lactate enzyme (mostly produced overnight), milk is not digested and again ferments in lower intestine.

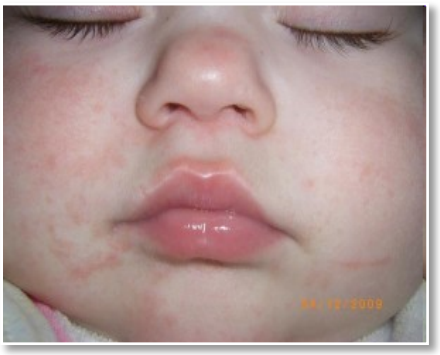
- Rare that no lactase dehydrogenase secreted
- Study showed that 24% **older** children affected by lactose intolerance
- Note: cheese and yoghurt (for example) are partially broken down so not an indicator of lactose intolerance
- Gut motility normal
- Some races (Afro-Caribbean) commonly do not digest milk well
- Symptoms approx **90 – 120** mins
- Try Colief?

Vagal nerve irritation

Common theory that compression of vagus nerve as it exits foramen of skull is responsible for gut irritability. Affects control of stomach sphincters. May be true for some, especially those that vomit older milk.

- Caused by labour compression (but also elective Caesareans?)
- A subgroup of colic
- No particular vagus nerve implicated – there is considerable overlap in function

The Allergic Gut



- Look for signs of general allergic response:
  - Most reliable indicator - skin, scalp, rash on mouth
  - mucus
  - gushing vomit (parents may describe as "projectile" must be clear as projectile vomit is a potential red flag in babies)

- Consider family history
  - Do parents have allergies
  - Bottle-fed easier to manage: can exclude cow-based formula, or even go to non-animal formula
  - If breast fed try exclusions

- General food irritants for breast fed babies: (not allergies) brassicas (contain alkaloids) and bananas (very complex)
- Palpatory indications – tissues are tight and irritable
- Treatment: relax tissues/fascia – may cause allergy to subside

Sickness and vomiting:

A good diagnostic tool:

- Reflux and allergy: fresh vomit
- Pyloric stenosis: vomit may be brown and a bit smelly, due to age
- If later in system, much darker and smellier.
- Latter will be the children who do not put on weight, with thin, thready stools

- Gut stenosis / atresia: Vomiting old feeds and most feeds soon after birth
- Reflux – posseting
- Beware meningitis – raised ICP causes projectile vomiting

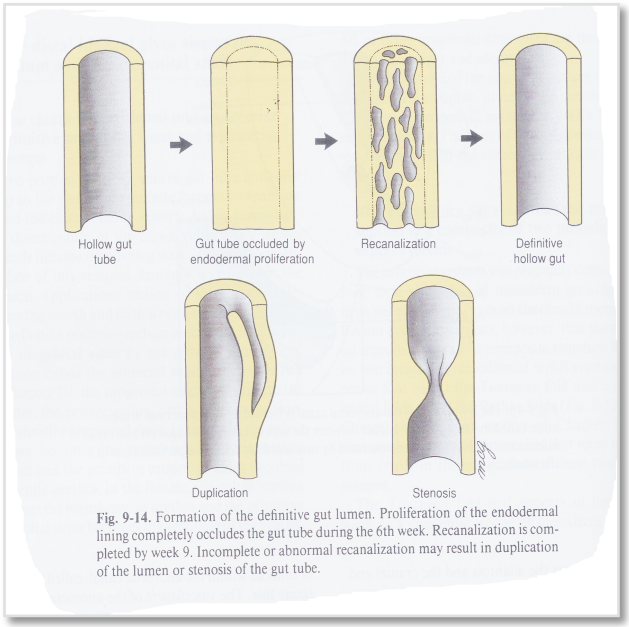


Fig. 9-14. Formation of the definitive gut lumen. Proliferation of the endodermal lining completely occludes the gut tube during the 6th week. Recanalization is completed by week 9. Incomplete or abnormal recanalization may result in duplication of the lumen or stenosis of the gut tube.

Review:

- Colic - no vomit
- Allergies – gushing vomit, but variable (some feeds but not others)
- Cerebral oedema – projectile vomit

As promised, a picture of a baby covered in sick…

Treatment approaches – 1

- Osteopathic treatment is effective – including for lactose intolerance
- Reflux and colic cause pain = tension
  - Sleep affected
  - Tolerance of pain decreases with sleep loss
- Osteopathic treatment relaxes infant
  - Research showed sleep improves
  - Decreased tissue irritability

Treatment approaches – 2

- Reflux
  - Treat the thorax primarily
  - Palpate shape of rib cage
  - Treat diaphragm, crura, liver congestion, spinal lesions, pelvis and sacrum
  - Takes time for symptoms to improve

Treatment approaches – 3

- Vagal nerve compression
  - Treat specifically
  - Do remember C1 and condylar paths
  - Difficult to differentiate between left and right vagus

- Turkey bags (the mesenteric bag around the gut) – allow these to release, through face-down treatment. This aids lymph drainage

Summary

- Anatomy helps palpation
- Use time after feed to help diagnose
- Vomit is also important!

Note: ASA will not permit any claim to treat colic or colicky pain, but it is permissible to use testimonials (parent's own words).

A good reference for parents:

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Nothing to do with Colic!

ADHD

One potential aspect of ADHD:

- Affected by conversion of blood sugars
- Conversion is affected by breathing – insufficient oxygen places greater emphasis on adrenal/anaerobic mechanisms
- Children need sweet things to keep blood sugar levels up (pizza/pasta kids)
- Use of adrenal system makes them hyperactive