LIFIB Your Local Infant Feeding Information Board

LIFIB Briefing Paper: Management of Colic & Reflux

The purpose of this Briefing Paper is to equip Midwives, Health Visitors and partners (including GPs and breastfeeding peer supporters), with information around colic and reflux, and their management, in infants (under 12 months), to

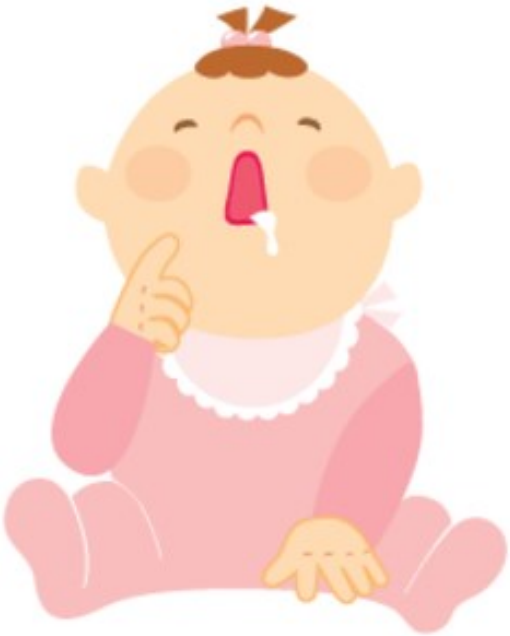
A) clarify what colic and reflux ARE, and what they are not**;**

B) outline **possible courses of action** and ways of supporting families whose babies are suffering from colic or reflux;

and

C) examine and evaluate the various forms of medical management of colic and reflux, available to families and practitioners, and their efficacy.

This briefing paper has been commissioned to support healthcare professionals in Lancashire and was funded by Lancashire County Council via the North Lancashire Baby Friendly Project.



Colic

Colic has been defined as "spasmodic contraction of smooth muscle causing pain and discomfort". In studies it has arbitrarily been defined as lasting three hours a day on more than three days a week for at least three weeks. Symptoms are usually described as high pitched, inconsolable crying accompanied by flushing of the face, drawing up of the legs, passing flatus and difficulty in passing bowel motions. The cause remains unclear, however, systematic review has suggested:

- problems within the gut where excessive crying is the predominant symptom, caused by cow's milk allergy, lactose intolerance or excess wind
- a behavioural problem resulting from parental interaction
- excessive crying is simply at the extreme end of normal
- it is a collection of aetiologically different entities difficult to determine clinically

In most babies, symptoms resolve by 3-5 months of age but the period can be exhausting for parents who may be frantic to find a "cure" particularly as symptoms are often worse in the evenings. Incidence is up to 25% but is more common in those babies fed formula.

Babies of mothers who smoke are twice as likely to experience symptoms of colic as those who don't there are also reports that colic is less frequent in breastfed babies - certainly there is no evidence that cessation of breastfeeding is beneficial in reduction in colic symptoms, however observation of feeding technique by a skilled breastfeeding worker may be beneficial to identify any problems associated with an imbalance in milk transfer.

Reflux

Infant reflux is described as "non-forceful regurgitation of milk into the oesophagus".

Some gastro-oesophageal reflux (GOR) occurs in most babies. An estimated 40-50% babies under 3 months regurgitate their feed at least once a day (Craig 2004), and it is particularly common in preterm infants, younger babies and those with neurodevelopmental disorders or hernias - even if repaired (Patient.co.uk). Incidence peaks around 4 months. GOR is a normal physiological process which usually happens after eating in healthy infants, children, young people and adults, so in babies who are often lying horizontal for feeding and sleeping, milk simply comes up and there is no retching as associated with a gastric infection.

The predominant symptom is frequent regurgitation of feeds (posseting). Diagnosis is usually made by clinical symptoms. Other signs include:

Irritability or excessive crying
Recurrent hiccups
Frequent night waking
Frequent coughing

Research is consistent that frequency of regurgitation declines over the first 6 months and dramatically after 12 months (NICE 2015). This interestingly corresponds with the time when babies can sit and stand therefore their stomach is less restricted, precipitating posseting.

GOR Gastro Oesophageal Reflux is distinct from GORD which is Gastro Oesophageal Reflux Disease. If symptoms of (GOR) Reflux are associated with respiratory disorders or suspected oesophagitis, it is termed gastro-oesophageal reflux disease (GORD). Here again diagnosis is made on clinical symptoms and there are no clear cluster of symptoms to guide prescribing. Signs which may suggest a diagnosis of GORD:

The baby is not gaining weight
The baby vomits frequently and forcefully
The baby spits up green or yellow fluid
The baby spits up a liquid which looks like coffee grounds
The baby repeatedly refuses feeds
The baby has blood in the bowel motions

NICE (NG1) 2015 states that GOR is a normal physiological process in infancy, which is common and normal. Parents can be reassured that it does not need any investigation or treatment unless the child presents with symptoms such as unexplained feeding difficulties, distressed behaviour, or faltering growth. Overfeeding is a common cause in artificially-fed infants who may benefit from smaller, more frequent bottle feeds.

NICE(2015) suggests that a common scenario is that infants with frequent regurgitation are taken to see the GP. A prescription is often given for medication to alleviate parents' concerns that the regurgitation is abnormal. The medication may be unnecessary if the regurgitation is not causing any problems, for example if the infant is otherwise well, and is still gaining weight. Instead of medication, advice and reassurance that GOR is normal and will resolve in time is often all that is needed.

They suggest that GOR is not routinely investigated or treated if an infant or child without overt regurgitation presents with only one of the following (NICE NG1 2015 Recommendation 1.1.6):

unexplained feeding difficulties
distressed behaviour
faltering growth
chronic cough
hoarseness
a single episode of pneumonia

In formula-fed infants with frequent regurgitation associated with marked distress, the following stepped-care approach is recommended (NICE 2015):

- review the feeding history, then
- reduce the feed volumes only if excessive for the infant's weight, then offer a trial of smaller, more frequent feeds (while maintaining an appropriate total daily amount of milk) unless the feeds are already small and frequent, then
- offer a trial of thickened formula (Recommendation 1.2.3).

CONTD...

CONTD from page 3…

NICE go on to suggest that if the stepped-care approach is unsuccessful, stop the thickened formula and offer alginate therapy (Gaviscon Infant sachets ®) for a trial period of 1–2 weeks. If the alginate therapy is successful continue with it, but try stopping it at intervals to see if the infant has recovered (Recommendation 1.2.5).

In breast-fed infants with frequent regurgitation associated with marked distress, ensure that a person with appropriate expertise and training carries out a breastfeeding assessment. If the frequent regurgitation associated with marked distress continues despite a breastfeeding assessment and appropriate breastfeeding management changes, consider alginate therapy for a trial period of 1–2 weeks. If the alginate therapy is successful continue with it, but try stopping it at intervals to see if the infant has recovered.

Silent Reflux

Silent reflux is described as reflux where the regurgitation is swallowed rather than being spat out. Babies may cry and show signs of distress but not posset. Symptoms may otherwise be identical to GOR.

Medical Therapy for GOR

With GOR, medication is unnecessary. However parents may wish to try remedies to relieve symptoms of excessive crying and posseting in their babies. Medication should not be commenced without prior referral to an expert in breastfeeding to optimise attachment.

Medical Therapy for GORD

Acid-suppressing drugs, such as proton pump inhibitors (PPIs) eg Omeprazole, or H2 receptor antagonists (H2RAs) eg Ranitidine should not be used to treat overt regurgitation in infants and children occurring as an isolated symptom (Recommendation 1.3.1).

The sachets of alginate should be dissolved in water or expressed breastmilk as described below. However, alginates are constipating as they thicken the gastric contents. This may cause further distress to the baby and parents and anecdotally can lead to prescription of bulk forming laxatives in addition to the alginate.

Some studies looking at the effectiveness of Gaviscon and of the anti-emetic Metoclopramide in treating the symptoms of GOR have found that they neither decreased frequency nor duration of GOR, however the study sizes are small and the results inconsistent.

Though these are available on prescription and so nil cost to the families, it's worth healthcare professionals knowing that Ranitidine is the cheapest option, then Omeprazole, and Gaviscon the most expensive with the sachets costing roughly £1 per day.

Specialist products for formula fed babies with GOR

There are now products from the main UK manufacturers to fulfil this need in the market: Danone's Aptamil and Cow & Gate brands both have 'Anti-reflux; versions which are £13.33 per kg / £11.67 per kg respectively) however these are not approved by the Advisory Committee for Pharmaceutical Science); Nestle SMA have 'Staydown' at £11.11 per kg, and Mead Johnson produces Enfamil AR, at £13.33 per kg. Prices correct at October 2015.

Medical Therapy for Colic

The use of Simethicone drops (*Dentinox©, Infacol©*) have not been shown to be effective although they are popularly recommended to mothers. The proposed mechanism of action is to bind bubbles of wind together aiding dispersion.

The addition of lactase enzymes (Colief©) to breastmilk has been suggested as a treatment for colic, however randomised and blinded controlled studies where formula or expressed breastmilk had lactase or placebo added and was incubated for a period before being given to the baby, have failed to produce evidence for this approach as all families reported reduced crying over the study period. This may be because allowing formula to 'sit' refrigerated for hours before being used meant that air incorporated into it while mixing has been allowed to rise and escape from the liquid, and that in giving ''foremilk' to the child at the end of a feed reduces the air swallowed baby a baby during the fast letdown at the start of the feed.

Supporting Families With Babies Exhibiting Colic Symptoms

Most cases of colic clear up over time, but simple changes can help reduce symptoms:

- Feed more frequently and respond at the baby's first cues that he/she is hungry – crying is a late sign of hunger and will increase the air swallowed making trapped gas more likely;
- Ensure that baby's feeding position and style, whether breast or bottle, does not result in the baby swallowing air with its milk;
- Keep the baby upright after feeds over the shoulder ideally for at least 30 minutes;
- Take time to wind baby in an upright position with their head supported by the carer's hand – be prepared with a muslin cloth over the shoulder and a bib on the baby to protect clothing (and reduce washing!)
- Put baby down to sleep flat on their back. The whole of the top of the crib can be raised, avoid the use of pillows etc to raise the head of the baby.
- Ensure that breastfeeding management has been optimised to ensure the baby has access to all the milk, and that the mother's breasts are well drained after a breastfeed; ensure an appropriately qualified individual is involved in the dyad's care.

Caring for a baby with colic is difficult, exhausting and confusing. It may be isolating as the mother may be concerned about the baby crying so much when outside the family home. What will other people say? What if the crying disturbs people or makes them think the baby is not be cared for properly? The mother may feel a loss in confidence as well as exhaustion. Being told that her baby's symptoms are normal may be somewhat reassuring, but may also leave her feeling helpless.

Supporting Families With Babies Exhibiting Reflux Symptoms

Most cases of reflux clear up over time, but simple changes can help reduce symptoms:

- Feed more frequently and respond at the baby's first cues that he/she is hungry: crying is a late sign of hunger and increases air swallowing, making regurgitation of feeds more likely.
- Ensure that baby's feeding position and style, whether breast or bottle, does not result in the baby swallowing air with its milk.

- Keep the baby upright after feeds over the shoulder ideally for at least 30 minutes. Do not put the baby down in a car seat where they slump. Try not to jiggle or move the baby too much as the feed settles
- Take time to wind baby in an upright position with their head supported by the carer's hand – be prepared with a muslin cloth over the shoulder and a bib on the baby to protect clothing (and reduce washing!)
- Put the baby down to sleep flat on their back. The whole of the top of the crib can be raised, but avoid the use of pillows etc to raise the head of the baby.
- Ensure that breastfeeding management has been optimised to ensure the baby has access to all the milk and that the mother's breasts are well drained after a breastfeed; ensure an appropriately qualified individual is involved in the dyad's care.

Caring for a baby with reflux is difficult, exhausting and confusing. It may be isolating as the mother may be concerned about the baby posseting when outside the family home. Does she have enough changes of clothes for herself and the baby? What will other people say? What if the regurgitated milk goes onto someone or something else? The mother may feel a loss in confidence as well as exhaustion. Being told that her baby's symptoms are normal may be somewhat reassuring, but may also leave her feeling helpless.

LIFIB promotes exclusive breastfeeding as the best form of nutrition for infants under six months of age, and this should be promoted, supported and protected wherever possible.

This briefing covers all infants; including those who breastfeed, who are artificially fed or those who do a combination of both. For breastfed babies who present with feeding problems, breastfeeding should be protected as this is usually the best management. Specialist milks should only be considered when there is truly a clinical need after a thorough assessment. Assessment should include common feeding management issues and consideration of whether the appropriate infant feed products are being correctly prepared, stored, and fed to baby.

REFERENCES / LINKS

First Steps Nutrition (June 2015). Infant Milks In The UK http://www.firststepsnutrition.org/pdfs/Infant_Milks_June_2015.pdf

NICE NG1 2015 GORD in children http://www.nice.org.uk/guidance/ng1/resources/gastrooesophageal-reflux-disease-recognition-diagnosis-and-management-in-children-and-young-people-51035086789

Lancashire Medicines Management "Prescribing Guidelines for Specialist Infant Formula Feeds" Oct 2014. http://www.lancsmmg.nhs.uk/wp-content/uploads/sites/3/2013/04/Prescribing-Guidelines-for-Specialist-Infant-Formula-Feeds-V3-Oct-2014.pdf

DIBM Reflux in Breastfeeding https://www.breastfeedingnetwork.org.uk/wp-content/dibm/reflux.pdf

http://www.nhs.uk/Conditions/Colic/Pages/Introduction.aspx

If there's anything you would like from LIFIB, please get in touch!

Currently we have over 300 followers on our Twitter account, @The_LIFIB; the first place to hear about new things is via our feed. We don't spam: why not join us?!