Helping to give a good start
Expert guidance on infant feeding problems

Colic • Constipation • Reflux • Cow’s Milk Protein Allergy
Specially formulated with carob bean gum to reduce regurgitation by 78%\(^1\)

- Greater viscosity in the stomach compared to starch based feeds\(^2\)
- Helps normalise oesophageal pH\(^3\)
- Significantly reduces reflux episodes and regurgitation severity scores\(^1\)
- Less irritability and discomfort for baby, peace of mind for mum


IMPORTANT NOTICE: Breastfeeding is best for babies. Aptamil Anti-Reflux is a food for special medical purposes. It should only be used under medical supervision, after full consideration of the feeding options available including breastfeeding. Suitable for use as the sole source of nutrition for infants from birth, and as part of a balanced diet from 6-12 months. This product is not for parenteral use.
Hello and welcome to our Excellence In Health Visiting supplement.

Last July we ran a survey in partnership with Aptamil Professional, which received a fantastic response from health visitors. In your replies you admitted to having knowledge gaps in areas such as colic, constipation, reflux, food allergies and bottle-feeding. In our post-survey discussions with Aptamil Professional we decided it would be useful to produce a supplement which addressed these queries and which, in the style of the journal, would carry excellent independent and evidence-based articles.

We have gathered together a team of experts to produce this supplement, which is packed full of useful information and advice, and we hope it will both inform you and be a practical help to your daily professional practice.

Our experts include Alison Wall, who has many years of experience in health visiting. We felt Alison was not only ideally placed to offer advice on colic, but also to answer some interesting questions posed by the survey (p13). Jackie Falconer provides authoritative and reassuring information on reflux (p6) and Dr Jenny Gordon conveys genuine passion for the need to assess and treat constipation problems early to prevent long term problems (p4).

Finally, with more children than ever presenting to clinics with cow’s milk protein allergy symptoms we hope the article written by our expert paediatric allergy specialists Dr Carina Venter and her co-author Kate Maslin on p8 will guide you in making the right call.

Of course you can find articles on all these subjects and more via our journal website www.jfhc.co.uk and you can also see some of our authors speaking on their expert areas by visiting www.aptamilprofessional.co.uk.

Happy reading!

Penny Hosie, Editor
A “colicky” and unsettled baby, who cries a lot and seemingly can’t be comforted, can deplete the energy reserves of any new parent. **Alison Wall** draws upon her experience as a health visitor to suggest various ways to cope with and alleviate the stress.

**Alison Wall** *Independent Public Health Practitioner*

The first few months with a new baby are exhausting, even with the most settled of infants. However, when a baby appears unhappy, cries a lot and is hard to settle (even after feeding), as is often the case with a colicky baby, some parents can feel isolated, as if they are failing on every single level.

In fact they are not alone. Colic is a common problem, with about 10 to 30% of infants experiencing symptoms of colic between three to 13 weeks after birth.

A continually crying baby can easily knock a parent’s confidence, causing immense parental stress, and although there are various ways to manage colic it can be difficult to prove efficacy.

Some relief can be provided using products containing simeticone, which allegedly help to dissipate the air bubbles that can become trapped in the immature digestive system. However, the reason for this remains unclear and some suggest that their use is no more effective than a placebo.

Other parents may prefer to use homeopathic remedies, believing these are gentler on the digestive system, and an online search of popular forums such as Netmums and mumsnet can source information on remedies that have “worked” for other parents. Massage
Colic

Case history

Baby S was born at 39 weeks, weighing in at a healthy 7lbs 4ozs. Her mother (Ms B) was thrilled to have a normal delivery after her stress-free first pregnancy and was expecting that all would go well after the birth. Initially baby S settled well, but after four weeks she would draw up her legs after a feed and cry uncontrollably for at least four to five hours every night. Her parents, who tried everything, including putting her in her car seat and driving round the neighbourhood, became exhausted, and in desperation, Ms B decided to visit her GP to ask for help.

The GP contacted the health visitor, who made a home visit and suggested that Ms B should get showered and dressed every morning, to establish a routine.

She also explained that colic is common and can be due to a number of causes, which are sometimes difficult to pinpoint. An allergy to the cow’s milk protein in milk needs to be considered and possibly medically investigated. The health visitor should check the baby, including a stool sample, and assess the growth pattern to ensure that the baby is thriving. Essentially colic is a diagnosis of exclusion and if there is any doubt then the health visitor must refer to a medical colleague to eliminate other causes for the crying.

In this case the health visitor listened sympathetically to Ms B, who admitted that, although she lacked confidence in her previous job, she always felt she would make a wonderful mother. However, she now felt she was failing even in this role, feeling incapable of achieving what she considered to be “simple” tasks such as keeping a tidy home and settling the baby in her cot. Her partner was also tired and they argued frequently, as their tolerance levels were so low.

The health visitor explained that dealing with a new baby and adjusting to their demands is a difficult chapter to manage. New parents need to be aware that routines will need to adapt and certain things may need to slip somewhat, for example, someone who usually always cooks meals from scratch may find that being flexible and buying a few microwave meals and takeaways alleviates some of the strain. This is not failing, but providing a breathing space that is really beneficial. Equally, friends and neighbours may offer to help and will be delighted when their help is accepted, as they will be able to feel that they too have contributed and supported the new parents.

The health visitor also stressed the importance of both parents keeping the lines of communication open and talking through their feelings, acknowledging that crying is draining for anyone but especially so for new parents at such an emotional time in their lives. The need to support one another emotionally is essential.

In addition, the health visitor also encouraged the mother to meet other new mothers by directing her to suitable groups in the community to prevent her from becoming socially isolated and help her realise that she is not alone.

Gradually Ms B started to make more friends and by sharing ideas on how to manage the periods of crying she learned not to panic every time her baby cried. She also began to be proactive and set a structure to the day. Babies love structure, routines and predictability so this calm new approach also appeared to ease the crying periods. Ms B discussed what she had learnt with her partner – this enabled him to participate and not feel he was on the periphery.

The health visitor called again when baby S was three and a half months old. Ms B informed the health visitor that the crying had stopped and life was so much better. The health visitor left, feeling delighted when their help is accepted, as they will be able to feel that they too have contributed and supported the new parents.

This following case history describes a typical scenario of a family initially struggling to cope with a colicky baby and suggests some measures to help alleviate the distress.

**Key points**

- Colic is very common and is not the parent’s fault.
- Health visitors should reassure parents that if the cause of the problem is colic, the crying will stop (typically at three to four months) and suggest various methods to help.
- However, if the crying continues, other possible causes for the crying need to be excluded.
- Further support for parents can be gained from organisations such as Cry-sis (www.cry-sis.org.uk) and Home-Start (www.home-start.org.uk).
- The NSPCC has published a useful pamphlet called All Babies Count: Support for parents which can be downloaded for free at http://www.nspcc.org.uk/help-and-advice/for-parents-and-carers/guides-for-parents/all-babies-count/all-babies-count_wda90709.html. Alternatively, call 0808 800 5000 for a free copy.

**References**


Health visitors play a key supportive role to the families of infants and toddlers experiencing constipation, says expert Dr Jenny Gordon. Offered in tandem with an effective treatment plan, this lessens distress and discomfort and helps to ensure that it does not develop into a chronic condition.

Constipation is very common in childhood and is currently estimated to affect between five to 30% of the population. Constipation is described as the “passage of abnormally delayed or infrequent passage of dry, hardened faeces often accompanied by straining and/or pain”, it is rarely life threatening and therefore you might expect it to have little impact on health. The reality, however, is very different; with many babies and children requiring medical and nursing support due to the condition causing great misery and discomfort.

Why early diagnosis is vital
Constipation is not a disease, but a condition with a collection of signs and symptoms that may not always be recognised, resulting in delayed diagnosis and treatment. It is, therefore, important to identify and treat constipation early in order to prevent an acute episode of constipation becoming chronic.

Constipation is termed idiopathic when it cannot be explained by any underlying abnormalities. Although the exact aetiology is not fully understood, a number of factors can contribute to the condition, such as pain, dehydration, reduced fluid intake, psychosocial factors and a family history of constipation. While parents describe painful stooling as the most important factor in constipation, few relate the presence of soiling to constipation and therefore they do not always recognise it early enough.

It is also known that many people delay seeking help, possibly because they may think that they should be able to treat the condition themselves, that it will resolve on its own, that they won’t be taken seriously by health professionals, or that they may be thought of as “bad parents”. Health professionals need to raise awareness of the problem by talking about it, so that people can get help and support in order to prevent persistent problems.

Clinical guidance
In newborns and preschool children a health visitor may be the first point of contact for families. The National Institute for Health and Clinical Excellence (NICE) published a clinical guideline in May 2010 to help provide a consistent, coordinated approach to the best care for children with idiopathic constipation. The case studies that accompany this article are used to highlight common issues.
**Constipation**

**Expert diagnosis 1: Susie**

Every child is an individual. It is important to establish idiopathic constipation from a history and physical examination to exclude any underlying causes. Health professionals can ask about the amount and consistency of stool passed in addition to the frequency. It may be that when Susie appears to be in pain and “grunting” that she is simply vocalising the sensation of wanting to open her bowels. Constipation would be indicated by large, hard stools or small pellet-type stools.

**Anal fissures**

The most common cause of pain is anal fissure (a tear of the anal canal), most commonly due to the passing of a large hard stool. Anal fissures are common in babies, but mostly seem to affect those aged six to 24 months. The fissure causes severe pain that may result in the baby withholding stools in an effort to avoid further pain. Untreated fissures set in motion a cycle of negativity towards bowel movements, constipation caused by withholding, which in turn results in increasing pain.

Health professionals should confirm the diagnosis and reassure families that there is a suitable treatment.

**Todder case study 2: Elliot**

Elliot is 17 months old. When first weaned he would eat anything, but since his mother introduced lumpy foods and finger foods he is hardly eating anything except for fish fingers, rusks and chocolate buttons. He passes hard, lumpy and dry stools every three to four days. Elliot’s mother reports that he hides behind the sofa and “dances” around when trying to pass stools. On the days he passes stools Elliot becomes irritable and red in the face, with an increase in crying, and screaming.

Elliot is displaying classic withholding behaviour, often perceived as straining to pass a stool when in fact he is holding on to prevent the passage of a painful stool. The withholding of stools for a long period of time results in distension of the rectum and causes the nerves, which signal the urge to go to the toilet, to become insensitive and habituated. This often results in the loss of soft or liquid stool from the bowel known as “soiling”. It is recommended not to use dietary interventions alone as a first-line treatment.

**Treatment plan**

Elliot is having daily high fibre, high fluid and plenty of water. Elliot’s mother has been given plenty of tools and audit templates, which allow early identification and effective treatment. However, whilst there is no single treatment, it is known that early identification and effective treatment leads to far better outcomes.

Health professionals will find NICE guidelines useful in making a diagnosis and these will also help in managing the condition for families. Tools on the NICE website include care pathways, costing tools and audit templates, which allow health professionals to assess the quality and consistency of the care provided.

**Treatment plan**

NICE (2010) recommends that the child can start oral laxative therapy with disimpaction if required, followed by maintenance. The dose should be monitored as well as the response, and treatment should be continued for several weeks after a regular bowel habit has been re-established. NICE highlight the importance of offering families regular follow-ups and support, with families reporting that they value both written and verbal information about what to expect and the best ways to access any additional support.

**Expert diagnosis 2: Elliot**

Elliot’s constipation may have been caused by dehydration. Sometimes during the weaning process toddlers do not drink enough water. Elliot may also have had a feverish illness, when it is very common for the child to become dehydrated. Encourage plenty of water and diluted fresh fruit drinks in the diet. Try to encourage them to eat fruit, which can be pureed or chopped, depending on their ability to chew. The experience of families eating together plays a role in teaching children to eat “by example”, in that they watch others eating food that may be unfamiliar to them and will eventually copy what they see. It is important to persevere with a variety of foods and encourage healthy eating, while concurrently dealing with the constipation challenge.

Instead, constipation can be treated with laxatives and a combination of non-punitive, age appropriate behavioural interventions.

**Conclusion**

This article acknowledges that constipation can sometimes be difficult to recognise given the diversity of presenting symptoms. However, whilst there is no single treatment, it is known that early identification and effective treatment leads to far better outcomes. Health professionals will find NICE guidelines useful in making a diagnosis and these will also help in managing the condition for families. Tools on the NICE website include care pathways, costing tools and audit templates, which allow health professionals to assess the quality and consistency of the care provided.
Infant Reflux

Best practice management for gastro-oesophageal reflux

Gastro-oesophageal reflux (GOR) can vary in severity, so it is vital to quickly assess whether parents simply require advice and reassurance, or a referral for specialist support. Jackie Falconer offers expert advice

Jackie Falconer RD Specialist Paediatric Dietitian

Gastro-oesophageal reflux (GOR) which describes the passage of gastric contents into the oesophagus with or without regurgitation and vomiting, is a normal physiological process occurring several times a day in healthy infants, children and adults. Most episodes happen in the postprandial period and last for less than three minutes. Regurgitation, also known as “posseting” or “spitting up”, occurs daily in about 50% of infants less than three months old and spontaneously resolves in most infants by 12 to 14 months. However, in GORD (gastro-oesophageal reflux disease), the more severe presentation of the condition when an infant does not respond to simple management measures, acid-induced inflammation in the oesophagus leading to oesophagitis may develop. This can be associated with other symptoms, such as faltering growth, apnoea, irritability, feeding difficulties, haematemesis and iron deficiency anaemia.

Although there are many guidelines on reflux available, this article mainly refers to ones published in 2009 by an international group. They offer an evidence-based overview of the diagnosis and management of gastro-oesophageal reflux and gastro-esophageal reflux disease in the paediatric population.

First line management

Initial management for GOR involves parental reassurance and simple feeding measures, such as reviewing volumes and frequency of feeds, along with postural advice (i.e. keeping the baby upright after feeds for at least 30 minutes) and avoiding exposure to tobacco smoke. Small frequent feeds are often recommended alongside frequent winding before, during and after feeding. The prone elevated position of 30 degrees cannot be recommended alongside frequent winding before, during and after feeding. The prone position should be avoided as it is associated with an increased risk of sudden infant death syndrome (SIDS) if infants are placed in the prone position for sleeping.
Adding thickener to infant formula or using a pre-thickened commercial formula may be recommended for bottle-fed babies. Anti-refluxant formulae (AR) containing processed rice, corn, potato starch, guar gum or carob bean (also known as locust bean gum), and feed thickeners which are based on rice, maize starch or carob bean have been shown to reduce vomiting frequency but not the time with pH < 4 (reflux index) measured by a pH study6. Infants who fail to respond to first line management may then be referred to a specialist for further advice.

Cow’s milk protein allergy (CMPA) factors

Reflex can be secondary to cow’s milk protein allergy (CMPA) and a significant improvement in 30 to 40% of infants on a hypoallergenic formula was seen in two studies by Iacono, Cavataio and colleagues8,9. A therapeutic trial for two to four weeks of an extensively hydrolysed formula (one that was validated as being tolerated by at least 90% infants with CMPA with 95% confidence) may be recommended8. In those failing to respond to a hydrolysate feed an amino acid-based formula should be used8. Infants should be selected to trial a hypoallergenic formula if they have a positive atopic history, positive allergy tests, persistent reflux that has not responded to reflux medications, or mucosal changes on biopsy such as oesophagitis. If infants respond well to the trial and symptoms resolve then it is recommended that they continue with the hypoallergenic formula until they are one year of age, when they can be challenged with milk containing foods. If mums are breastfeeding an initial trial of a dairy-free diet for two weeks is recommended.

Feeding problems

Infants with reflux can be more demanding and difficult to feed and have been shown to ingest significantly fewer calories than in matched infants without GOR10. Feeding problems such as texture aversion, feed refusal and consequently faltering growth are seen in infants with GORD. The reasons for this are not known; however, clinical observation suggests that negative feeding experiences plus parental or carer anxiety may be contributing factors. Extreme texture aversion can be a major problem, with infants failing to progress from puree foods onto lumps and finger foods. The use of “bite and dissolve” finger foods, which melt in the mouth and do not require chewing, may help when moving from puree foods onto lumper textures.

The following advice may be useful for parents of infants with feeding problems:

- Limit mealtimes to 20 to 30 minutes
- Eat together whenever possible
- Encourage self-feeding where appropriate
- Give positive praise
- Ensure the child has a set routine of regular mealtimes and snacks (three meals and two to three snacks)
- Avoid force-feeding and using distractions such as TV, toys etc. during the mealtimes
- Create a relaxing environment without signs of parental anxiety
- Use stickers, charts and non-food-related rewards for older children
- Use finger foods and “bite and dissolve” foods to encourage new textures
- Alternative food should not be given if the meal is not eaten.

Parents and carers may also find information on support groups useful, such as Living With Reflux (www.livingwithreflux.org) and Allergy UK (www.allergyuk.org).

Conclusion

In the large majority of infants, GORD is a normal occurrence which can be self-limiting and will in general outgrow with time. Offering parental reassurance and advice on feeding frequency and volumes may well be all that is needed. However, in those infants who experience more severe symptoms then a combination of medical and dietetic management under the care of a multidisciplinary team is of importance in managing these challenging infants. Where feeding problems exist, input should also include behavioural and psychological support.

Case study

A three-month-old male presented with falling growth (75th to 2–9th centile), loose stools, feed refusal along with back arching and eczema. He was on four-hourly breastfeeds along with top-up syringe feeds (as recommended by healthcare professionals). Due to his faltering growth and feeding behaviour, nasogastric (NG) tube feeding commenced, with expressed breast milk (mum on a milk-free diet). Symptoms continued and therefore he was switched to an extensively hydrolysed feed which led to cessation of his loose stools, improvement of his eczema and weight gain.

A positive pH study led to the commencement of reflux medications (stopped at nine months). Speech therapy review advised thickened feeds via a specialist spoon bottle along with weaning when he reached the appropriate age. Psychological support was provided professionally and via another family with a tube-fed infant. The NG tube was removed three months after discharge and by the age of two years he was on a normal diet (apart from egg, as an allergy review had shown an IgE-mediated response) with his weight on the 25th centile.

References

Developing a clear understanding of cow’s milk protein allergy

Understanding how cow’s milk protein allergy (CMPA) presents in infants is key to health visitors making an accurate initial assessment and subsequently advising on a specialist referral. Here experts Carina Venter and Kate Maslin guide you through the process.

According to the World Allergy Organization, about 1.9% to 4.9% of children suffer from cow’s milk protein allergy (CMPA), yet perceived food allergy could be up to 10 times higher than that confirmed by appropriate tests. Infants are exposed to cow’s milk protein via the maternal diet if breast-fed, via standard infant formula, or when solids are introduced. It is, therefore, not surprising that cow’s milk is often identified as a possible cause for skin and gut problems, particularly in early infancy.

The Clinical Guideline 116 on the Diagnosis and Assessment of Food Allergy in Children and Young People in Primary Care and Community Settings, produced in 2011 by the National Institute for Health and Clinical Excellence (NICE), recommends that many manifestations of food allergies could be managed in primary care. However, this necessitates health visitors having correct and up-to-date information on the different manifestations of CMPA in order to make an accurate diagnosis and referral.

Understanding how allergy works within the immune system

The first step in ensuring a satisfactory diagnosis is to have a good understanding of the immune mechanisms involved. According to the European Academy for Allergy and Clinical Immunology (EAACI) and World Allergy Organization (WAO), an adverse reaction to cow’s milk can be referred to as CMPA if it involves the immune system. Non-allergic cow’s milk hypersensitivity (lactose intolerance), on the other hand, does not involve the immune system. CMPA is further divided into immediate (IgE-mediated) and delayed (non-IgE-mediated) allergic reactions, although some infants will present with a combination of both.

Key symptoms of CMPA

According to the NICE guidelines, food allergy can manifest as a number of different clinical...
Making an accurate diagnosis of CMPA
Although there is no official UK guidance on the diagnosis of CMPA specifically as yet, (British Society of Allergy and Clinical Immunology guidelines will be published in 2013), current NICE guidelines emphasise that CMPA should be particularly considered in infants:

- Where there is a family history of allergic disease (but N.B. no family history of allergy does not exclude the possibility of becoming allergic)
- Where symptoms are persistent and affecting different organ systems
- Who have been treated for moderate to severe atopic eczema, gastro-oesophageal reflux disease (GORD) or other persisting gastrointestinal symptoms (including colic, loose stools and constipation), but have not responded to the usual initial therapeutic interventions.

History taking is essential
Taking an allergy-focused history forms the cornerstone of the diagnosis of CMPA and NICE also recommend that questions should be asked regarding:

- Any family history of atopic disease (asthma, atopic eczema, allergic rhinitis or food allergy) in parents or siblings
- Any personal history of early atopic disease (eg. atopic eczema), less commonly upper and lower airway signs, and any obvious allergic reactions to other foods
- The infant’s feeding history – whether breast-fed or formula-fed – and timing of weaning (if commenced)
- Presenting symptoms and signs that may be indicating possible CMPA
- Details of previous management or dietary avoidance and any response to these interventions

What is the most appropriate infant formula for CMPA?
Choosing an appropriate formula for the infant should be based on clinical presentation, nutritional composition and residual allergenicity of the formula, although the palatability and age of the infant will also be factors. It is thought that an extensively hydrolysed formula (EHF) will improve symptoms in at least 90% of infants with CMPA. Therefore, use of an EHF will be the first-line treatment in most situations apart from those listed in Box 2. The DRACMA guidelines performed a comprehensive review of the literature and indicate the use of an amino acid-based formula (AAF) for anaphylaxis, Heiner’s syndrome, and eosinophilic oesophagitis, with the use of an extensively hydrolysed formula (EHF) for all other clinical presentations. Four additional papers, however, suggest the use of AAF for growth faltering (in the presence of another symptom of CMPA), severe atopic dermatitis, multiple food allergies and infants who are not responding to maternal avoidance of cow’s milk. There is disagreement whether EHF or AAF should be used for cow’s milk protein-induced enteropathy and food protein-induced enterocolitis syndrome (FPIES), therefore the decision should be based on clinical judgement.

Box 1. Signs and symptoms of possible food allergy according to the NICE guidelines

<table>
<thead>
<tr>
<th>IgE-mediated (Immediate)</th>
<th>Non-IgE-mediated (delayed)</th>
</tr>
</thead>
</table>
| The skin
| Pruritus               | Pruritus                   |
| Erythema               | Erythema                  |
| Acute urticaria        | Acute angioedema (most commonly in the lips and face, and around the eyes) |
| Gastro-oesophageal reflux disease |
| Loose or frequent stools |
| Blood and/or mucus in stools |
| Abdominal pain |
| Infantile colic |
| Food refusal or aversion |
| Constipation |
| Perianal redness |
| Pallor and tiredness |
| Faltering growth plus one or more of the gastrointestinal symptoms listed above (with or without significant atopic eczema) |

Confirming the diagnosis
Immediate allergic reaction (IgE-mediated CMPA)
For the diagnosis of IgE-mediated CMPA, the use of a skin prick test or specific IgE tests are recommended, but these should only be performed by those with the competencies to interpret the tests. It is important to understand that a positive SPT or specific IgE test merely indicates sensitisation and does not confirm clinical allergy. However, a positive test coupled with a very clear history of a reaction may be able to confirm a diagnosis, although an oral food challenge (after a period of cow’s milk avoidance) in a hospital setting will be required in many cases to confirm the diagnosis.

Delayed allergic reactions (Non-IgE-mediated CMPA)
There are no validated tests for the diagnosis of non-IgE-mediated CMPA, apart from an avoidance of cow’s milk for four to six weeks, followed by reintroduction or a home challenge to confirm the diagnosis. Home challenges may not be acceptable in children with severe forms of non-IgE-mediated cow’s milk allergy, especially where food protein enterocolitis is suspected, and these children should be referred to secondary/tertiary care.

Maternal avoidance of cow’s milk in the case of breast-fed infants, or choosing an appropriate formula for bottle-fed/partially bottle-fed infants, are crucial steps in the diagnosis of CMPA. Mothers avoiding cow’s milk from their diet should be supplemented with calcium and vitamin D and ideally referred to a dietitian.

© Journal of Family Health Care – Excellence In Health Visiting supplement
Allergies

What is the difference between lactose intolerance and cow’s milk protein allergy?

Lactose intolerance does not involve the immune system, but is caused by a deficiency of the enzyme lactase, resulting in an inability to digest lactose (milk sugar). It typically presents after a bout of gastroenteritis with symptoms of loose, watery stools, abdominal bloating and pain, increased flatus, and nappy rash, which usually improve after six to eight weeks of lactose avoidance. Hard cheese and yoghurt have lower levels of lactose than cow’s milk and are usually tolerated in those with lactose intolerance.

What about soya formula?

Soya-based infant formula is not recommended for infants under six months (with or without suspected CMPA) and is not the first choice treatment for infants over six months with suspected CMPA due to the risk of co-existing milk allergies and the isoflavonoid content. Soya infant formula is occasionally used in infants over six months of age if EHF is unpalatable, as are soya-based weaning foods, which can be a useful source of calcium. Introduction of soya-based infant formula or weaning foods should be discussed with a paediatric dietitian.

Box 2: Clinical presentation of CMPA and choice of specialised infant formula

Clinical presentation
- Acute urticaria or angioedema
- Atopic dermatitis
- Cow’s milk protein-induced gastroenteritis and proctocolitis
- Constipation/diarrhoea
- Cow’s milk protein-induced enteropathy
- Food protein-induced enterocolitis syndrome (FPIES)
- Gastro-oesophageal reflux disease
- Immediate gastrointestinal allergy

Clinical presentation
- Anaphylaxis
- Allergic eosinophilic oesophagitis
- Breast-fed infants who are not responding to maternal milk avoidance
- Cow’s milk protein-induced enteropathy
- Food protein-induced enterocolitis syndrome (FPIES)
- Growth faltering (in the presence of another symptom of CMPA)
- Milk-induced chronic pulmonary disease (Heiner’s syndrome)
- Multiple food allergies
- Severe eczema

Extensively hydrolysed formula

Extensively hydrolysed infant formulae (EHF) available in the UK for use in infants with CMPA

<table>
<thead>
<tr>
<th>Name</th>
<th>Manufacturer</th>
<th>Age</th>
<th>Constituents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pepti 1</td>
<td>Milupa Aptamil</td>
<td>0–6 months</td>
<td>Extensively hydrolysed whey</td>
</tr>
<tr>
<td>Pepti 2</td>
<td>Milupa Aptamil</td>
<td>6–12 months</td>
<td>Extensively hydrolysed whey</td>
</tr>
<tr>
<td>Nutramigen Lipil 1</td>
<td>Mead Johnson</td>
<td>0–6 months</td>
<td>Extensively hydrolysed casein</td>
</tr>
<tr>
<td>Nutramigen Lipil 2</td>
<td>Mead Johnson</td>
<td>6–12 months</td>
<td>Extensively hydrolysed casein</td>
</tr>
</tbody>
</table>

In case of poor resolution of symptoms, choose

Amino acid formula

Amino acid-based infant formulae (AAF) available in the UK for use in infants with CMPA

<table>
<thead>
<tr>
<th>Name</th>
<th>Manufacturer</th>
<th>Age</th>
<th>Constituents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neocate LCP</td>
<td>Nutricia</td>
<td>0–12 months</td>
<td>Amino acids</td>
</tr>
<tr>
<td>Nutramigen AA</td>
<td>Mead Johnson</td>
<td>0–12 months</td>
<td>Amino acids</td>
</tr>
</tbody>
</table>
Case Study: George

George was born at full term with a birth weight of 3.49kg (<50th centile). George's mum has a severe peanut allergy and a history of milk and egg allergy in childhood.

George was fully breast-fed but refluxing after every feed. By one month old, his weight had fallen to the 9th centile. A breastfeeding advisor suggested mum should exclude cow’s milk from her diet for one week and monitor George’s symptoms. George’s mum found the milk-free diet difficult to follow as her diet was already restricted due to her peanut allergy. At George's six-week check, the health visitor was concerned regarding a "rash" (possibly eczema) and poor feeding; therefore George was prescribed Nutramigen and Gaviscon by his GP. No referral to the dietitian was made at this point and the mum was not advised to take any calcium or vitamin D supplements.

George was referred to the paediatrician when he was 12 weeks old as his weight had dropped to the 0.4th centile, despite fully feeding on Nutramigen. A two-week trial of Neocate was commenced after discussion with the allergy specialist dietitian and usual skin care advice given as per the NICE guidelines on eczema. After two weeks on Neocate, George was vomiting less and his weight gain was starting to accelerate. Skin prick tests were negative to milk, wheat and soya, but positive to egg. The skin prick test to milk was negative, but the clinical history was strongly suggestive of non-IgE-mediated CMPA.

George was referred to the paediatric dietitian when he was 12 weeks old as his weight had dropped to the 0.4th centile, despite fully feeding on Nutramigen. Two months later, George was feeding well on Neocate and consuming amounts appropriate for his weight and age. He was having a varied diet, despite avoiding milk and egg. His weight had increased to the 25th centile (7.9kg) and his eczema was much improved.

It is usual practice to consider re-challenging after a period of six to 12 months of dietary exclusion. When George was reviewed by the dietitian at one year old, he had been having fromage frais for the previous two weeks without any adverse effect. He was therefore advised to follow a gradual milk reintroduction ladder at home, with firm instructions to stop immediately if there were any signs of allergy. His skin prick test to egg was negative (2mm), followed by a negative open egg challenge on the paediatric ward. Two months later, George was tolerating cow’s milk so Neocate was discontinued.

Conclusion

Cow’s milk protein allergy (CMPA) can present with a spectrum of immediate or delayed symptoms that can be mild, moderate or severe in nature. Symptoms may affect the respiratory, cutaneous and gastrointestinal systems (or a combination of these systems), and diagnosis is dependent on whether the allergy is IgE- or non-IgE-mediated in nature. Skin prick tests in isolation should be interpreted with caution by an experienced health professional, as diagnosis of allergy is dependent on a variety of factors. However, the community health professional can assist in this process by taking a thorough family history. Although the initial diagnosis and management of CMPA can take place in primary care, all infants on a cow’s milk exclusion diet should ideally be referred to a paediatric dietitian, preferably before weaning onto solid food takes place. Referral to secondary care should be made as per the UK NICE guidelines in more severe presentations of cow’s milk allergy.

Further Information:

The ACT on CMPA campaign:
Allergy UK, in partnership with infant nutrition specialists Danone Baby Nutrition and Nutricia Advanced Medical Nutrition have launched an awareness campaign – ACT on CMPA.

ACT stands for:
Awareness of the symptoms
Connect the symptoms together
Take action - could it be CMPA?

For further information visit
www.aptamilprofessional.co.uk
Aptamil Professional: 0800 996 1234
www.allergyuk.org
Allergy UK: 01322 619 898
www.anaphylaxis.org.uk
Anaphylaxis Campaign: 01252 542 029
www.neocate.co.uk
Neocate Healthcare Professional: 01225 751 098

References:

5. NICE. Diagnosis and Assessment of Food Allergy in Children and Young People in Primary Care and Community Settings. CG16 [online]. 2011. Available at: http://guidance.nice.org.uk/CG16 [Accessed Jan 2013]

www.jfhc.co.uk © Journal of Family Health Care – Excellence In Health Visiting supplement 11
Cows’ milk protein allergy (CMPA) can be difficult to diagnose, especially in cases where the reaction is delayed. This can be distressing for both infants and their families. Our aim is to help you support these families and aid prompt diagnosis and treatment.

Aptamil Professional is committed to providing healthcare professionals like you, with the information needed to quickly identify and manage the symptoms of CMPA. To do this, we recently commissioned a report with Allergy UK and Nutricia Advanced Medical Nutrition and created the ACT awareness campaign for healthcare professionals. In addition to this, we supply a range of valuable resources to help support you in your role.

**Our resources for you**

Our professional resources can help you gain a better understanding of CMPA at every stage, from early diagnosis to day-to-day management. You will find everything from the latest surveys conducted by Allergy UK, Nutricia Advanced Medical Nutrition and Danone Baby Nutrition, to a practical summary of the NICE guidelines, and webinars with renowned allergy experts Dr Adam Fox and Dr Carina Venter. We also have a range of expert allergy articles on our website, covering topics such as how to feed an infant with CMPA and an introduction to the nutritional aspects of infant atopy and allergic diseases. You can also sign up to our emails for expert opinions and resources on allergies.

**Our resources for parents**

We understand how distressing the diagnostic process can be for parents. Our practical resources are designed to help reassure and inform them at this difficult time. They include a symptoms diary – developed with Dr Fox, to record the infant’s symptoms and aid a GP’s diagnosis, a comprehensive leaflet of common questions mums have about diagnosis, and a downloadable booklet of nutritious dairy-free recipes for those babies diagnosed with CMPA.

Learn more at aptamilprofessional.co.uk
To start using our CMPA resources or to sign up to our allergy update emails, please visit aptamilprofessional.co.uk
Q1 Our survey revealed that health visitors (HVs) have “knowledge gaps” in areas such as reflux, colic, constipation and allergies. Is this due to a lack of training or time?

ALISON WALL: I think the answer is both. Training opportunities are limited and training can be time-consuming and costly. Also, due to capacity, HVs have been unable to take “time out” for training. You only need look at the last few years’ attendance at the annual CPHVA conference to see this. There are fewer resources too, so it falls to individual practitioners to find the knowledge and skills they need to perform well at work. There are online courses, but many HVs are understandably reluctant to spend time on the internet after inputting so much data on computer during their working day.

Q2 In terms of allergies, or worries about allergies, are these becoming more common?

ALISON WALL: Allergies are a prime example of an area where HVs lack knowledge and training. It is therefore understandable that if an infant presents in clinic with symptoms such as vomiting feeds, with poor weight gain and possible rashes, a HV’s initial thought is to suggest to parents a change of formula milk, rather than considering the possibility of cow’s milk protein allergy (CMPA). However, given the rise in numbers of babies being diagnosed with allergies every year, it makes sense for them to source appropriate guidance and practical training to consider CMPA as a differential diagnosis. A suspicion of CMPA means the HV can then advise a referral for medical assessment, which will hopefully significantly allay parental stress levels – not to mention a baby’s long-term discomfort. N.B: websites such as www.anaphylaxiscampaign.org, www.jfhc.co.uk and www.aptamilprofessional.co.uk can provide useful advice on allergies aimed at health professionals. [Editor: turn to p8 for an article on CMPA written by paediatric allergy experts.]

Q3 Our survey also highlighted that HVs find it difficult to gain access to reputable up-to-date information to answer mums’ questions about formula, safe preparation of bottles, sterilisation etc.? Does this mirror your own experience?

ALISON WALL: I am not at all surprised by the survey’s finding that information on bottle/formula feeding was the single most requested issue. Many practitioners are unsure where they stand if their organisation has achieved Baby Friendly Initiative (BFI) status. BFI seems to equate to breast milk feeding only, but to be really baby-friendly information about formula is critical, given that the majority of babies are on formulas. Additionally, many employing authorities discourage their colleagues from attending training events run by the private commercial sector, so they have to attend events in their own time and are openly fearful about the possible consequences if their managers find out. I have been irritated by this short-sighted approach my entire working life. However, in the new local authority culture, partnerships with the commercial sector might be easier to develop.

Q4 Although mobile use didn’t feature strongly in our poll, how can HVs embrace mobile technology as a modern way to connect with clients?

ALISON WALL: First, we need to be user-focused, and find out how families would prefer to communicate. Some will prefer the more traditional methods, but I’m sure many new mums would like to download apps and use their mobile equipment to source information, make appointments and receive reminders about assessments and immunisations. This will happen eventually, especially when HVs move into the culture of the local authority where councils are keen to move on to hot-desking and paperless ways of working. I have to make the proviso that use of Facebook and Twitter will have to be closely monitored and regulated, due to issues of confidentiality and age (Facebook, for example, is not available to people aged under 13). Also, older people and those on a low income may not have easy access to computers.

Q5 Can you see the role of health visiting changing in the new health landscape and how will this affect families?

ALISON WALL: Yes, there are major changes taking place. We will see an influx of newly qualified HVs, with a mix of backgrounds and experience, bringing fresh ideas and enthusiasm. The reality is though, that they will need support and guidance, which will fall upon those more experienced health visitors to manage. In terms of ongoing professional morale, child protection work is stressful and uncertain. New HVs are unlikely to stay in the profession if put under too much pressure, so those numbers may fall dramatically if new HVs and those nearing retirement start to leave. At present, HVs come under the responsibility of the National Commissioning Board. This has been put in place to ensure that the Department of Health intention to increase the workforce is fulfilled. However, from 2015 HVs will be working in local authorities, like their school nurse colleagues. In this new framework HV roles will be determined by the local authority agenda. Each area will have its local priorities as determined by the Health and Wellbeing Boards. In my area, the shadow health and wellbeing board has chosen working with troubled families and tackling childhood obesity as its key targets. Partnership working will be critical, and HVs are hopefully more likely to liaise more closely with public health colleagues after 2015. That should bring benefits in terms of their public health focus, although working with GPs may pose a challenge, as they will be working within the Clinical Commissioning Groups.

Q6 Finally, what advice would you pass on to any young person considering training or entering the HV profession for the first time?

ALISON WALL: I would encourage them to apply if they enjoy community work and feel confident about working independently. They need to recognise the challenges young families face and want to help build up the confidence of parents and carers in their decision making and care of children. If they are fortunate they might also be able to spend some time with a HV in practice before making a firm decision. On a professional level it is a really rewarding job, involving teamwork and partnership building across agencies. The government are right behind health visiting and acknowledge how important the first few years of life really are to long-term health outcomes.
If not, subscribe free at aptamilprofessional.co.uk to receive an extensive range of evidence-based information:

- Regular email updates featuring our latest reports on infant feeding problems, including cows’ milk protein allergy.
- Invitations to informative online seminars from leading experts.
- A wealth of free online resources and support material.

Subscribe free today at aptamilprofessional.co.uk

IMPORTANT NOTICE: Breastfeeding is best for babies. Infant formula is suitable from birth when babies are not breastfed. Follow-on milk is only for babies over 6 months, as part of a mixed diet and should not be used as a breastmilk substitute before 6 months. It is recommended that all formula milks be used on the advice of a doctor, midwife, health visitor, public health nurse, dietitian, pharmacist or other professional responsible for maternal and child care. Foods for special medical purposes should only be used under medical supervision. Suitable for use as the sole source of nutrition for infants from birth, and/or as part of a balanced diet from 6–12 months. Refer to label for details.