THEME

Mother and baby

The crying baby

BACKGROUND

Up to 20% of parents report a problem with their infant crying in the first 3 months of life. The majority of babies have no organic cause of crying and most crying subsides by 3–4 months.

OBJECTIVE

This article describes the management of persistent crying in the first 3 months of life.

DISCUSSION

Management includes exclusion of medical causes and ensuring the baby is adequately rested and fed. Unexplained episodes of crying can be managed by: carrying the baby, going for a walk with baby in the pram, giving baby a deep, warm bath, or playing 'white noise' or environmental sounds to distract the baby from crying. Postnatal depression is common in mothers of crying babies and should be actively screened for and appropriate clinical help offered if required. All families benefit from support including a review appointment and practical help around the home where possible.

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All babies cry. For the majority of babies crying begins around 2 weeks of age, peaks at 6–8 weeks, with an average duration of 2.6 hours per day, and largely subsides by 3–4 months.[1] Persistent crying occurs in up to 20% of babies, however, only 10% of these babies will have an organic cause of crying.[2] Organic causes may include cow and/or soy milk protein allergy, gastro-oesophageal reflux or lactose intolerance. Nonorganic causes may include tiredness, hunger, or an inability to self soothe due to delayed neuromaturation.

Medical causes of crying

Detection and management

Recent onset of crying in babies can be due to a number of conditions (eg. urine infection, hernia) but only causes of persistent crying are discussed here. Persistent crying (or 'colic' as it is popularly known) is traditionally defined as crying for more than 3 hours per day, 3 days per week, for 3 weeks in a row.[3] Some babies cry less than this but still cause considerable distress to parents. Medical causes can usually be excluded by a careful history and examination.

Cow's milk protein intolerance

In addition to persistent crying, one or more of the following signs and symptoms raises concern about cow's milk protein intolerance which can affect both breast and bottle fed babies:

- vomiting after most feeds
- diarrhoea with blood or mucous
- poor weight gain (<30 g per day on average)
- atopic disease, usually eczema
- family history of cow's milk allergy.[4]

Up to 50% of babies who are allergic to cow's milk protein are also allergic to soy milk protein. Management for formula fed babies includes:

- trial of soy milk based formula (first line)
- trial of partially hydrolysed formula (eg. Pepti Junior [second line])
- trial of amino acid based formula (eg. Neocate or Elecare).[5]

If there is a family history of soy milk allergy you may want to proceed straight to a partially hydrolysed formula. All formula trials should be done in conjunction with a behaviour diary (see below) to chart the baby's response. A response is usually seen within 2 weeks.

For breastfed babies, mothers need to exclude all dairy products (including casein and whey) and should take a daily calcium supplement. Again the response should be charted on a behaviour diary and if no improvement is seen after 2 weeks, mothers should resume a normal diet. More restricted diets (eg. no wheat, eggs, nuts) should only be undertaken with supervision from a dietician and only if there is strong suspicion that the baby has multiple food protein intolerances. Goat's milk is as allergenic as cow's milk.

Gastro-oesophageal reflux

In the absence of frequent vomiting (ie. five or more times per day) and/or difficulty during feeds, gastro-oesophageal reflux is unlikely to be a cause of infant crying.[6] In a study of 151 babies with persistent crying who were admitted to hospital for 24 hour pH monitoring and cry/sleep pattern recording, crying was related neither to the duration of reflux nor the number of reflux episodes and 'silent reflux' – whereby milk partly refluxes up the oesophagus but is not vomited out – was not seen.[6]

Treatment

Nonmedical approaches include: raising the cot by 30 degrees, thickening feeds with a commercially available food thickener, and keeping the baby upright for around 10 minutes after each feed.

Medications

Antacid medications such as Mylanta and Infant Gaviscon have never been evaluated as treatment for crying in blinded, randomised controlled trials.[7,8] Gaviscon is not recommended in babies as it contains high levels of sodium.

Antireflux medications such as ranitidine and omeprazole have been shown to be no better than placebo for infant crying in two recent randomised controlled trials.[9,10] Their use should, at best, be only considered if there is frequent vomiting or feeding difficulties.

Lactose intolerance

Crying accompanied by watery, frothy bowel actions may be due to lactose intolerance.[11] Perianal excoriation due to acidic bowel actions is often present. The diagnosis can be supported by the presence of reducing substances in the stool (>0.25%) with an acidic faecal pH (<7.0).

Treatment

Treatment includes a trial of lactose free formula in a bottle fed baby. Monitor response with a baby behaviour diary (*Figure 1*) and only trial for 1–2 weeks.

In a breastfed baby, lactase drops can be added to expressed breast milk, 12–24 hours before each feed. Alternatively, a lactase tablet can be crushed and a small amount given to the baby before the breastfeed (as per the manufacturer's instructions).

Nonmedical causes of crying

The tired baby, the hungry baby or the baby who just will not settle!

All families need support and should be reviewed regularly until the crying settles. Progress can be monitored with a baby behaviour diary (*Figure 1*). A diary can help normalise the crying (eg. by showing parents that their baby is crying an average amount) or can help parents solve the problem (eg. by recognising that their baby sleeps better if they are awake for longer periods between day time sleeps).

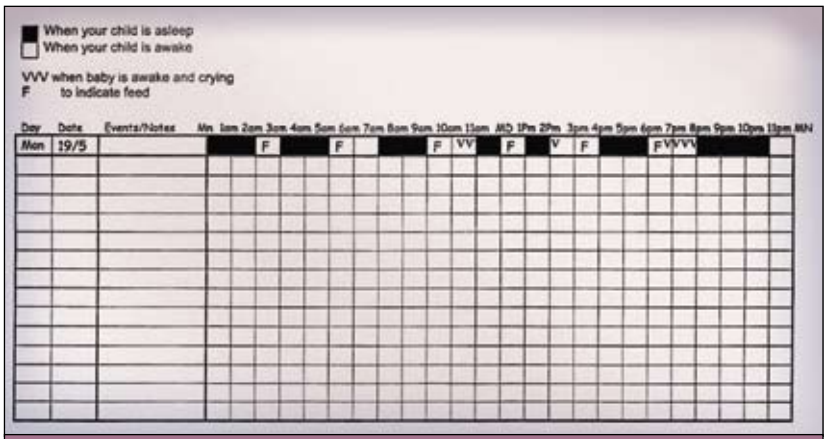

Figure 1. Baby behaviour diary

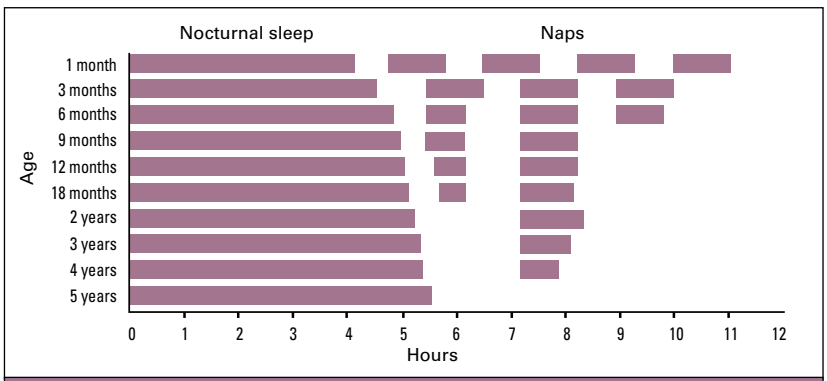

Figure 2. Childhood sleeping patterns

Is the baby tired? How can I encourage baby to sleep?

Some babies cry because they are overtired.[12] *Figure 2* is a guide to average sleep durations by age.[13] However, some babies will sleep less than the hours indicated on the chart and this may be normal for them. If a baby is awake and happy, they have had enough sleep, if they are awake and crying, they may need more sleep.

Parents often misinterpret a baby's tired signs as boredom or hunger. A tired baby frowns, clenches his fists, jerks his arms and legs and may later cry and yawn. When a baby is tired, they need to be taken to their sleeping place (this should be the same place for both day and night). They should be settled in their parent's arms and when they are quiet but not asleep, they should be placed in their cot or bassinet awake. Wrapping can help settle a baby in the first few months. If parents want their baby to sleep by itself, they should leave the

room before their baby falls asleep. In this way, the baby learns to self settle and when they wake after their first sleep cycle, they will be able to self settle again without parental assistance.

If the baby starts to cry, the parent should try to quieten them with stroking or patting but should leave before the baby falls asleep. This process can be repeated every couple of minutes until the baby has learnt to self settle. 'White noise' may assist this process.[14]

For some families, the 'campaign' to soothe the baby and avert their crying takes over. If this is happening and the baby is not settling to sleep despite 1–2 weeks of consistently encouraging self settling, then encourage parents to 'go with the flow' of their baby, eg. by letting them continue to play if they do not show tired signs or by taking them for a walk if they do not settle to sleep after 20–30 minutes.

Is the baby hungry?

Generally a hungry baby will:

- want to feed every 2 hours or less (babies may have an appetite spurt at 6 weeks and another at 3–4 months associated with 1–2 days of frequent feeding[15])
- not settle after feeds
- have poor weight gain (ie. <30 g per day on average), and/or
- take large milk top ups (>50 mL) if offered.

Consultation with a lactation consultant may help improve breast milk supply. A bottle of formula in the evening can be invaluable if a mother feels her milk supply is low at this time of day. Introduction of solids at an early age has not been shown to reduce infant crying.

The baby who just won't settle

Despite the above measures, some babies will not settle. These babies are thought to have immature neuromaturation. Once they start crying, they just cannot stop. By 3–4 months of age they have usually developed the ability to self soothe. For these babies the following can be helpful:

- a baby sling to carry the baby during crying times
- a walk in the pram or pushing the pram over a bump in the house (eg. where the carpet joins the floorboards)
- a deep, warm relaxation bath
- white noise or environmental noise played loudly enough to distract the baby from crying.[14]

Table 1. Help for parents – useful contact details

Australian Capital Territory
ParentLink – a confidential telephone information, advice, guidance and referral service
Phone 02 6205 8800 www.parentlink.act.gov.au/contact/contact.htm

Northern Territory
Parentline
Phone 1300 30 1300 (cost of a local call) www.parentline@kidshelp.com.au

New South Wales
Parent Line – a telephone advice and information service for parents
Open Monday to Wednesday 9.30 am – 8.30 pm, Thursday to Saturday 9.00 am – 4.30 pm
Phone 13 2055 (toll free)

Queensland
Parentline – available 8 am – 10 pm, 7 days a week to parents in Queensland and the Northern Territory
Phone 1300 30 1300 (cost of a local call) www.parentline.com.au

South Australia
Parents Help Line
Phone 1300 364 100 www.cyh.com/cyh/phl/phl_index.stm

Tasmania
Family Child & Youth Health Information Service Line
Phone 1800 808 178 www.dhhs.tas.gov.au/helplines/

Victoria
Parentline – a telephone information, advice and referral service for parents
Phone 13 22 89 www.parentline.vic.gov.au/

Western Australia
Parenting Line – a free telephone service providing information and advice for parents
Phone 08 9272 1466, 1800 654 432 (free call STD)

Treatment and support

Over-the-counter medications

Anticholinergic medications (eg. dicyclomine [merbentyl]) have been shown to effectively reduce infant crying in three randomised controlled trials.[7,8,16] However, adverse events including apnoea and seizures precludes the use of such medications in crying babies.[17] Simethicone (Infacol, Degas Infant Drops) has no effect on infant crying when compared with placebo in randomised controlled trials.[7,8]

Support

All families who have a crying baby are tired. Parents should be encouraged to:

- seek help from family and friends
- rest once a day when the baby is asleep
- plan ahead for baby's most difficult time of the day (eg. by preparing dinner in advance)
- arrange home delivery of food
- shop on-line
- arrange home help/nanny if affordable.

Postnatal depression is also common in mothers of crying babies[18,19] and can be screened for by questionnaires such as the Edinburgh Postnatal Depression Scale.[20] A mother who does not enjoy her baby may be depressed. Counselling and /or antidepressant medication may be required.

Other sources of help

- Child health nurse – some offer settling classes
- Parenting centres which offer day stays and overnight stays
- www.raisingchildren.net.au – an evidence based parenting website for families and health professionals
- Parent help lines (*Table 1*)
- Sounds for Silence – baby health and settling guide and CD. Available at www.soundsforsilence.com.au/.

Conflict of interest: none declared.

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