



Infantile colic

Rule out organic causes of inconsolable crying

BY JEAN-FRANCOIS LEMAY, MD

Periodic crying that affects infants in the first three months of life is one of the most common problems encountered by the primary care physician. Infantile colic is often defined by the "rule of three" — crying for more than three hours a day, for more than three days a week and for longer than three weeks — in an infant who's well fed and otherwise healthy. Although distressing to parents, fussing and crying are normal aspects of development — averaging 2.2 hours per day, peaking at six weeks of age and gradually decreasing.

Colic is a diagnosis of exclusion. The physician's role is to rule out less common organic causes. Signs of continuing distress should be watched carefully, especially in families whose resources are already strained. Clinicians should realize how much parents need reassurance that their baby is healthy and that the crying is indeed due only to colic, a condition that universally improves over time.

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Clinical manifestations

- age 3 weeks-3 months, peaking at 4-6 weeks of age
- onset usually delayed in preemies
- loud, high-pitched crying for hours, in late afternoon or evening
- crying time shortened when baby is picked up and cuddled
- between attacks, child is happy and well

Epidemiology and etiology

- prevalence — prospective studies, 3-28%; retrospective studies, 8-40%
- girls and boys equally affected
- siblings tend to have same condition
- resolution at 3-4 months of age; persists to 4-5 months of age in 30% of cases
- cause unclear, most likely multifactorial
- suggested etiologies:
 - gastrointestinal (GI) — flatulence, intestinal hormone abnormalities
 - food allergy — e.g. cow's milk protein
 - neurodevelopmental — transient developmental dysregulation of the central nervous system (CNS); may lie at the upper end of normal distribution of crying
 - psychosocial/parental factors — personality, anxiety, parenting skills, etc.
 - underlying organic causes — account for < 5%, but must be considered

Interventions

- no specifics — many studies have methodologic flaws
- car ride simulators/crib vibrators — not shown to decrease crying
- chiropractic — no benefit over placebo
- parental cuddling or carrying of infants — as much as desired
- excessive stimulation, such as abdominal massage — avoid

Clinical evaluation

History

- infant's behaviour, timing of crying episodes
- past apnea, cyanosis or struggling to breathe — for undiagnosed pulmonary or cardiac conditions
- detailed infant feeding habits
- frequency and quantity of spitting up — to rule out GI reflux, pyloric stenosis
- defecation, urination and sleeping patterns
- physical and emotional well-being of caregivers
- drug exposure during prenatal period

Physical examination

- remove infant's clothing to look for trauma or abuse
- observe for lethargy, poor skin perfusion, tachypnea
- check weight gain and rectal temperature (> 38° C suggests infection)
- do workup for GI and CNS wellness

Prognosis

- first year of life, usually do well
- at one-year follow-up, colicky vs non-colicky — no significant difference in temperament
- asthma or allergic disease — no reported association
- maternal anxiety or depression — resolves as colic does

Management

Feeding essentials

- adequate feeding with a regular schedule
- proper positioning to prevent aerophagia
- regular burping
- no overfeeding
- correct-sized hole in bottle nipple
- breastfeeding encouraged

Possibly therapeutic

- hypoallergenic diet for breastfeeding mom — eliminate cow's milk, eggs, nuts, wheat, chocolate, caffeine
- hypoallergenic formula if bottle-fed

Not useful

- soy formula — an important allergen in infancy
- low lactose, untreated and/or fibre-enriched formulas — no evidence of efficacy

Medications

Drugs

- not recommended
- dicyclomine — associated with apnea; contraindicated at age < six months
- atropine-containing drugs — potentially harmful side effects
- simethicone — no more effective than placebo
- cimetropium — warrants more research

Alternative treatment

- sucrose — more data required
- herbal tea — mixtures of chamomile, vervain, licorice, fennel and lemon balm — may decrease crying, but potential interference with normal feeding
- gripe water — fennel or dill seed boiled in water and corn syrup, then strained — no specific research, reduces GI flatulence; avoid versions with sugar or alcohol

Organic causes

Central nervous system

- CNS abnormality — e.g. Chiari type I malformation
- subdural hematoma

Gastrointestinal

- constipation
- cow's milk protein intolerance
- gastroesophageal reflux
- intussusceptions
- rectal or anal fissure

Infection

- meningitis
- otitis media
- urinary tract infection
- viral illness or other infection

Trauma

- abuse
- corneal abrasions or foreign body in eye
- fractured bone

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