

Infant colic

COMPETENCY – The resident should be able to define colic, develop a differential diagnosis for the crying infant, and devise a diagnostic and therapeutic plan for the infant with colic.

CASE – A young mother and father present to the Urgent Care area of your clinic with their 6 wk male infant. They are tearful and appear exhausted. They tell you that for the last 2 wks the baby has had nightly episodes of inconsolable crying that lasts more than 3 hours at a time. During these episodes the baby grimaces, clenches his fists, and draws up his legs. They say they have tried everything, yet they cannot get the baby to stop crying. This is their first baby, and they say they are “at their wits’ end.”

You perform a physical exam that is unremarkable. You suspect colic.

QUESTIONS –

1. The parents have never heard of colic, and ask you to explain.
2. They ask you to explain the causes of colic.
3. What is your differential diagnosis of the inconsolable, crying infant?
4. How is the diagnosis of colic made?
5. The parents state that they have read about many “folk remedies” to cure colic. They ask you to provide them with a treatment plan.

REFERENCES –

1. Clemons, RM. Issues in newborn care. *Primary Care; Clinics in Office Practice*. 2000; 27: 251-267.
2. Sferra, TJ. Gastrointestinal gas formation and infantile colic. *Pediatric Clinics of North America*. 1996; 43: 489-510.
3. Trocinski, DR. The crying infant. *Emergency Medicine Clinics of North America*. 1998; 16: 895-908.

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You perform a physical exam that is unremarkable. You suspect colic.

QUESTIONS –

1. The parents have never heard of colic, and ask you to explain.

Infantile colic is a behavioral state characterized by unexplained paroxysms of inconsolable crying, lasting greater than 3 hours and occurring more than 3 days a week. It occurs in 10-25% of infants. The onset is usually at 2-3 weeks, peaking at 6-8 weeks, and remitting at 3-4 months. The episodes generally occur during the evening hour. The infant may grimace, pass flatus, clench his/her fists, and draw up his/her legs. The cry of colic is prolonged, loud, high-pitched, and often described as piercing.

2. They ask you to explain the causes of colic.

Colic is a diagnosis of exclusion. Previously organic causes such as carbohydrate malabsorption leading to excess gas production by colonic fermentation were felt to have some role in the pathophysiology of colic. There is now evidence in refuting this hypothesis. Studies have demonstrated that when a standardized nonabsorbable carbohydrate is delivered to the colon there is no discernable difference in the production of breath hydrogen between patients with colic and controls. Also studies examining the effect of decreasing the amount of lactose in the diet of infants with colic found no improvement in symptoms. Finally, radiographic studies have found no evidence of increased gas in infants with colic.

Behavioral factors such as feeding abnormalities, infants positioning while feeding, burping abnormalities, or crying while feeding that lead to increased swallowed air (aerophagia) have also been suggested. However, it can be argued that intestinal gas is more a result of colic, from excess crying leading to aerophagia, than a cause of colic.

Psychological factors suggested as possible etiologies of colic include underdeveloped parenting skills, inadequate social network, postpartum depression, and parental anxiety and stress.

3. What is your differential diagnosis of the inconsolable, crying infant?

Infection – meningitis, encephalitis, sepsis, pneumonia, UTI, osteomyelitis, septic arthritis, toxic synovitis, AOM, herpes stomatitis, oral thrush, gastroenteritis, herpangina, insect bites, cellulites

Trauma – nonaccidental trauma (skull fracture, intracranial bleed, rib fracture, pneumothorax, long bone fracture, intraabdominal blunt trauma), accidental trauma (falls), corneal abrasion, hair tourniquets (digits, penis, clitoris)

Metabolic – inborn error of metabolism, electrolyte abnormality, acid/base derangement, hypoglycemia

Foreign body – oral, nasal, ear, pharynx, eye

GI – intussusception dehydration constipation, GERD

CV - SVT

4. How is the diagnosis of colic made?

As stated previously, colic is a diagnosis of exclusion. Careful history and physical exam to r/o the above differential is important. Attention should be paid to weight gain and vital signs. Routine labs are not recommended unless there is an index of suspicion based on history or physical exam.

5. The parents state that they have read about many “folk remedies” to cure colic. They ask you to provide them with a treatment plan.

Treatment of infantile colic should consist of reassuring parents that colic is self-limited, encouraging frequent parental rest breaks with a babysitter that is mature, capable and aware of the situation, acknowledging caregiver burnout and developing strategies for crying episodes, and providing information on community support.

Folk remedies such as herbal teas (chamomile, licorice) have shown questionable efficacy. Behavioral modifications such as special positioning of infants during feeding, increased carrying, early response to crying, soothing motions, use of a carrier, or riding in a car, have not shown to be effective and were found to be counterproductive compared to the control group in one study. (1) Medications targeting GI symptoms have been widely used. Simethicone (mylicon) is the medication most frequently used. Clinical trials in the literature support the use of simethicone, however, these trials are poorly designed. In addition, both the placebo and simethicone groups have demonstrated equal improvement. Despite the fact that simethicone has an excellent safety profile, it should not be administered to infants if there is no proven benefit. Cost of medication and falsely re-enforcing the family’s belief that the infant is “ill” and requires medication are some of the identified sequelae of recommending simethicone use.

Changing formulas is not recommended until further investigation for etiologies such as cow’s milk protein allergy, and eosinophilic gastroenteritis can be undertaken. Changing

to lactose-free formula has no benefit. Remember that often infants may tire rapidly while feeding after excessive crying bouts and thus will be hungrier sooner.

REFERENCES –

4. Clemons, RM. Issues in newborn care. *Primary Care; Clinics in Office Practice*. 2000; 27: 251-267.
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