considered the problem from different viewpoints. Attention is directed particularly to the fact that among the 8 papers presented at this symposium only 2 were by pediatric allergists, Dr. Fries' and Dr. Ratner's.

REFERENCES


COLIC IN INFANTS—GENERAL CONSIDERATIONS

By Alwin C. Rambar, M.D.

MANIFESTATIONS

Infantile colic is an ill-defined condition which seems to consist primarily of pain associated with symptoms ranging in degree from general fussiness to paroxysms of agonized crying. The symptoms usually start after feeding and are worse late in the day. Besides the typical unhappiness, as exemplified by clenching the fists and flexing the legs, the infant often makes sucking movements and appears to be searching for food. Usually these infants have a great deal of gas, manifested by excessive belching, flatus, and rumbling. The passage of gas is occasionally followed by temporary relief, supporting the theory that distended loops of intestine from collected air causes colic. It is most common in the first born, usually starting at 2 to 4 weeks of age, and lasting through the third or fourth month.

It is difficult to say what percentage of infants have colic since a certain amount of fussiness is natural, and crying that may be considered normal in one household, might be regarded as intolerable in another. Certainly colic is not "the almost infallible occurrence" that Brenneman once described, although Wessel found that only 50 of 98 infants he studied were considered contented babies. From my own experience in both private practice and clinic work, I have gained the impression that the incidence of colic is higher in the private group.

ETIOLOGY

There is little agreement as to the cause of colic, but a basic immaturity of the intestinal tract, a constitutional predisposition to hypertonicity, hunger, improper feeding technique, allergy or a reaction to tenseness in the home, are commonly described as etiologic factors. A careful history is important for obvious medical reasons, and also to provide an opportunity for the mother to unburden herself and decrease her feeling of inadequacy. A thorough physical examination must follow to exclude such conditions as cerebrospastic disease, detectable congenital defects and other organic causes. This investigation should include a rectal examination, as occasionally gentle dilation of a tight rectal sphincter will give rather spectacular and permanent relief.

There is no longer doubt that allergy may be a cause of colic. When a history of major allergy is found in the immediate family, a cows milk formula should be changed to a relatively non-allergenic one, such as a soybean formula. However, even when cows milk allergy exists, dramatic results do not always follow this change but may require a week or two of trial. Infants with allergic colic often show other signs of allergic sensitivity, such as eczema, pylorospasm, diarrhea, stuffy nose, etc. Usually however, the signs of unhappiness precede the more obvious allergic symptoms, thus increasing the difficulty of diagnosis. While many pediatricians believe that changing a formula is useless or an
admission of failure, there is a definite psychologic advantage in change. The use of skimmed, powdered, evaporated, protein, or acidified milk is also occasionally helpful in colic.

During the neonatal period, the experienced pediatrician can often recognize the characteristics in an apprehensive mother that will result in a colicky baby. Family tension is undoubtedly a fairly common cause, and conversely may likewise be a result. The added financial burden of a child, the distaste of an undesired pregnancy, the prospect of sharing a husband's affection, or a feeling of inadequacy produced sometimes by interfering relatives or a dictatorial nurse, may all contribute to the tension.

**TREATMENT**

Many doctors reserve the use of drugs for the most severe colic but they may be beneficial in any patient. Paregoric is excellent for the baby with infrequent attacks if the dose is adequate. At least 1 drop per pound of body weight should be given and repeated in 8 to 12 hours if necessary. Whisky or antihistamine drugs in small doses may give relief. Antispasmodic drugs combined with phenobarbital, given regularly before each feeding, provide the best relief if used over a period of time, and have no apparent deleterious effects. The use of tranquilizing drugs such as the rauwolfia derivatives has been reported successful. The best mechanical aid in treating colic is a pacifier. It serves its purpose by providing additional sucking gratification and relaxation, especially in the well-nourished infant who apparently does not need extra food. An enema may occasionally be helpful in a particularly trying episode.

Until an exact cause can be found, the treatment of the unhappy family is of utmost importance. The pediatrician must give them adequate time and sympathetic understanding. Despite the fact that treatment does not always meet with success, the doctor's interest and strength will serve well to help the parents and baby through this trying experience.

**EXPERIMENTAL STUDIES OF ALLERGIC COLIC**

*By Joseph H. Fries, M.D.*

The purpose of this presentation is to discuss true allergic colic—as differentiated from the many other forms of colic. An allergic etiology probably accounts for only a small fraction of the colic seen in infancy. Nevertheless, it is worth emphasis because it is in this field that one can present objective evidence.

It used to be generally assumed that "infantile colic" implied only a spastic disturbance of the small intestine. In the light of present understanding, this spastic phenomenon may involve not only the small intestine, but also the colon, and even the pylorus of the stomach.

Dr. Fries is Chief of Allergy, Lutheran Hospital, Brooklyn, New York.

**THE EXPERIMENTAL STUDIES**

One does not have to speculate on the "modus operandi." It has been possible to demonstrate visible evidence of this otherwise subjective phenomenon by roentgenogram. In atopic children, specifically chosen because they were subject to intestinal cramps from known foods, it was possible to activate various parts of the gastrointestinal tract by feeding these allergenic foods concealed in barium. These studies were published in detail some time ago.

We could produce segmental contraction of the small intestine, demonstrating configurations on the roentgenogram comparable to those seen in sprue or celiac disease; and observe pylorospasm and colonic spasm in association with cramping abdominal...
COLIC IN INFANTS—GENERAL CONSIDERATIONS
Alwin C. Rambar

Pediatrics 1956;18:829

Updated Information & Services
including high resolution figures, can be found at:
http://pediatrics.aappublications.org/content/18/5/829

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
https://shop.aap.org/licensing-permissions/

Reprints
Information about ordering reprints can be found online:
http://classic.pediatrics.aappublications.org/content/reprints

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 1956 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 0031-4005.
COLIC IN INFANTS—GENERAL CONSIDERATIONS
Alwin C. Rambar
Pediatrics 1956;18;829

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/18/5/829