

Infantile Colic-New Treatment Protocols (3 Months Colic, Evening Colic)

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Abstract: A prospective consecutive cases of infants aged between newborn to 3 months old was studied for the past 3 years . In a study I conducted on 6000 infants for 3 years (July 2007 To June 2010) between the age of newborn and 3 months old. 3000 infants were treated with simethecone alone and another 3000 infants on simethecone and preprobiotics along with mother's exclusion diet for first three months of infant's life (To minimise BIG "C"-- Colic in infants ---Mothers to avoid 8 small "c" s --cow'smilk, coffee, chicken, caubage, cauliflower, chicken egg, chacolote and cigarettes) in both these studies. Simethecone , Prepro Biotics and 3 Months Mothers' Exclusion Diet = More than 90% infants improved by minimizing the abdominal discomfort, evening cry and keeping the babies wellbeing within a period of 15 days and symptom free till the end of 3 months of their ages. Based on this data it is recommend that combination of simethecone and preprobiotics along with along with mother's exclusion diet for first three months of infant's life is very effective , economical and new protocols in the treatment of infantile colic .

Key words: Pediatrics • Infantile colic • Simethicone • Preprobiotics • Mother's exclusion diet

INTRODUCTION

Babies cry when they are hungry. They also cry for other reasons such as cold or discomfort or wet nappies as they grow older. They cry when they cross or frustrated. Mothers by experience are able to distinguish a cry for food or a cry in pain. But it is difficult sometimes. Colic is derived from Greek word kolon reflecting the belief that it is involved in some bowel disturbance.

Definition: Colic may be defined as paroxysms of irritability , fussing or crying in an otherwise healthy and well fed infant. Normal crying times are less than 100 minutes per day in 2 weeks infant, less than 120 minutes per day in 6 weeks old and less than 60 minutes per day in 12 weeks old. It usually occurs in the first born babies, starts within three weeks of birth and often even in the women's hospital.

Rule of Three: common before 3 months old infants and ends around 3 months of age colic occurs 3 hours per day and 3 days per week

Incidence: It appears more at evenings between 4 and 10 o' clock, so it is called as evening colic. It weans off after 3 months age.. It is a source of great anxiety for the

parents whose ineffective attempts to calm the infant may exacerbate the condition. As many as 15 ---- 30 % of infants experience colic. 2 % of sufferers will continue to have the problem until 6 to 7 months of age particularly in low birth weight andpreterm infants.

Causes: These are poorly understood. Some of the following may be of importance.

- Continuous sucking a pacifier, prolonged crying, frequent bottle or breast feeding, babies swallow air along with milk. The air has to pass outside either by mouth or anus. As long as stomach is filled with air, baby gets crampy pain. More cry, more air swallowing, more pain---the vicious cycle.
- If a mother breast feeds her baby , it could just be that the baby is getting gassy from the foods the mother is eating . Sometimes just by a change of mother's diet is enough to help.
- Overfeeding with large volume of milk formula in an effort to calm the infant may cause gastric distension and discomfort . Genuine hunger may initiate the cycle.
- Emotionally active, hyperactive, tense infant is likely to have this colic. Family tension, parental anxiety, maternal depression during pregnancy, failure of parent-infant interaction may be aggravating factors.

- When the infant has siblings who also suffered from the condition, colic is more likely.
- Parental misinterpretation was discovered to be the cause of infant colic.
- Mothers who smoke have higher incidence of infant colic in their babies than non-smokers.
- Intestinal allergy to cow's milk protein, a history of allergy in other members. It may be associated with colic, vomiting and diarrhea. Perhaps mother's milk contains cow's milk protein from the diet.
- Primary and secondary lactose intolerance also cause colic.

Features: When Infants cry, they draw their legs onto their abdomen with a flushed face. They feel free when they pass flatus.

Diagnosis:

- Thorough infant's physical examination should be done by a children specialist.
- History should be taken to look for organic causes for fussiness such as otitis media, urinary tract infections, central nervous system disorders (tumors, fits, infections), intestinal disorders (gastritis, infections, esophagitis, obstruction), osteomyelitis, physical child abuse.
- Important but simple tests --urine for routine examination, culture and sensitivity and stool for lactose intolerance.

Important Diagnostic Test: If the infant cries while lying on bed, ask the mother to take infant from the bed, put him on shoulder and move gently. If he stops crying instantly or slowly, the baby is suffering from Infantile Colic. If the baby is crying continuously, positively the baby is suffering from pain of organic causes which were mentioned earlier.

Treatment: If careful examination indicates no cause for fussiness, the following measures are some times helpful.

- Support sympathetic instructions of parents- benign nature of the colic, self-limiting disease. Doctors should explain the pain goes off after three months of age-Reassurance.
- Regular schedule for feedings and nappies to avoid overfeeding and underfeeding.
- Low level sound in the infant's sleeping area --such as radio or tape recorder may be soothing.

- Singing softly to a baby can help because babies like to hear soothing sounds.
- Gentle movement in the cradle-OLD BUT GOLD METHOD. Some colicky babies just like to be kept moving.
- Milk free diet. Avoid frequent milk formula changes. Whey based hydrolysate- the best. Cow's milk protein intolerance also causes colic.
- To minimise BIG "C" (Colic in infants) Mothers to avoid 8 small "c"s for first 3 months of infant's age cow's milk, coffee, chicken, cabbage, cauliflower, chicken egg, chocolate and cigarettes.
- Avoid rough handling babies.
- Keep the colicky baby in a dark when feeding them rather than a lighted room.
- Immediately after each feed, one should do burping 5 to 6 times on the back of the infant. Gas is expelled as belch and keep the baby for sleep. Otherwise gas entered into the mouth along with milk stays in the stomach and causes discomfort and crampy infantile colic.
- A warm bath of 5 to 10 minutes and kneading or massaging the abdomen may help.
- Belly massage is carried out starting from the navel, the parent massages the abdomen softly in a clockwise motion. As massage continues, the parent uses a firmer hand and larger circles. This is done 10 to 15 minutes after feeding to promote the post prandial gastrocolic reflex.
- Cutaneous massage also institutes a visceral reflex that relaxes the intestine, allowing easier passage of feces and flatus.
- It may be worth a trial of simple measures such as gripe water and peppermint water.
- The use of beer, alcoholic beverages, wine for sedation is not recommended.
- Treatment with dicyclomine is no longer recommended as respiratory collapse, coma and death in infants less than six months old have been reported with this drug.
- Parents also may be taught to minimise the amount of gas reaching the intestine by their infants in an upright position to facilitate burping and limiting feeding times 4 to 6 minutes.
- Parents should take care of themselves by taking breaks away from the baby.
- Dealing with a colicky baby is really stressful. The good news is colic ends around 4 months.
- Parents need counselling and support.

- Simethicone is fully approved for the treatment of intestinal gases in infants. The possible etiology of gas may explain the positive results in the studies of simethicone in colic.

Clinical Study: In a study conducted on 6000 infants for 3 years (July 2007 to June 2010) between the age of newborn and 3 months old. 3000 infants were treated with simethicone alone and another 3000 infants with simethicone and pre probiotics particularly including Lactobacillus Rhamnosus along with mother's exclusion diet for first three months of infant's life (To minimise BIG "C"-Colic in infants-Mothers to avoid 8 small "c" s -cow's milk, coffee, chicken, cabbage, cauliflower, chicken egg, chocolate and cigarettes) in both these studies.

RESULTS

Only Simethicone and Mother's Exclusion Diet for First Three Months of Infant's Life: 50% infants improved in one month, 30% in 2 months and 20% showed no improvement even at the end of 3 months

Simethicone , Prepro Biotics and Mother's Exclusion Diet for First Three Months of Infant's Life: More than 90% infants improved by minimizing the abdominal discomfort, evening cry and keeping the babies well being within a period of 15 days and symptom free till the end of 3 months of their ages. Remaining 10% improved in a period of 2 months.

It was concluded that the combination of Simethicone and preprobiotics along with first mother's exclusion diet for the first three months of infant's life is very effective ,economical and new protocols in the treatment of infantile colic since there is no specific treatment for infantile colic in the past years. Co therapy with preprobiotics and 3 months mothers' exclusion diet were associated with favourable outcome in this clinical study . Less than 1 % of infants, if the colic continues to persist even after one year , it may lead to recurrent abdominal pain and irritable bowel syndrome in future.

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Note: The condensed part of this article was presented by me as poster Presentation in 26 th international pediatric association , (ipa 2010) on 05-08-2010, Johannesburg, south africa