

MANAGEMENT OF COLIC PAIN IN CHILDREN WITH AYURVEDA INTERVENTIONS OF SHOOL CHIKITSA

Dr. Mridula¹, Dr. Neeharika Verma²

¹Associate Professor, Department of Kaumarbhritya, Motherhood Ayurveda Medical College & Hospital (MAMC), Roorkee, Uttarakhand. Email: mridu715@gmail.com, ORCID ID: 0009-0009-8968-3082,

²Assistant Professor, Department of Kaumarbhritya, Motherhood Ayurveda Medical College & Hospital (MAMC), Roorkee, Uttarakhand. ORCID ID: 0009-0000-9842-2153, Email: neeharikaverma1995@gmail.com,

ABSTRACT

Regardless of the source, sorrow plagues the entire world. The body uses pain as a protective mechanism to alert a person to a potentially hazardous situation or interaction. Babies are vulnerable to colic, a common but poorly understood illness. Udarshoola is said to be the most common problem seen in babies; it can affect their ability to gain weight and their quality of life, thus appropriate care is the main concern. An unpleasant sensory and emotional experience is called pain. According to Ayurveda, vitiated Vata is the source of discomfort. Abdominal discomfort that is really intense is known as udarshoola. One of the primary causes of an infant's illness development is stanya dushti. Therefore, in addition to the newborn, the mother should also receive treatment. Based on clinical experiences, this article examines Ayurvedic treatment for infantile colic.

KEYWORDS: Infantile colic, Shool, Vataj, Pittaj, Kaphaj, Udarashoola

INTRODUCTION

In Ayurveda, the term "urdarshool" refers to stomach pain for various reasons. The Vedana adhyay of the Kashyapa Samhita describes udarshool in Kshreerapa avastha (infantile age). The symptoms of udarshool include Stanamvudasyati (refusal to breastfeed), Rodana (excessive crying), Udarstabdhata (abdominal distention), Mukha sweda (sweating), and Shaityam (cold extremities), which share characteristics with infantile colic. According to modern medicine, a self-limiting functional gastrointestinal condition (FGID) with a favorable natural history is infantile colic (IC). IC significantly affects a large number of newborns and their families worldwide. Its symptoms are broad and generic, and in a small percentage of babies who may need a medical evaluation, they may signal a potentially significant underlying issue, even though they are not indicative of an illness. The pathophysiology seems to be multifaceted, suggesting a complicated interaction between the environment and the baby. According to one of the most researched theories, the gut microbiota plays a crucial role in IC pathophysiology. Numerous strategies have been proposed for the clinical treatment of IC; probiotics can alter the microbiota of the host and improve health. Since there is growing evidence that the gut microbial environment of colicky newborns is different from that of healthy infants, probiotics could be able to restore equilibrium and improve the intestinal microbiota landscape. The most well-researched probiotics and combinations for treating and preventing IC are updated in this review along with the latest guidelines. A newborn with infantile colic will wail uncontrollably for more than three hours a day, more than three days a week, for more than three weeks. Infantile colic is a benign process in which an infant has paroxysms of inconsolable crying for more than three hours per day, more than three days per week, for longer than three weeks. 40% of infants consult the pediatrician for excessive crying due to abdominal pain during the first 3 months of life, and about 10-12% of infants aged 3-12 months consult their pediatrician for the same complaints. The exact cause of infantile colic is unknown, but proposed causes include alterations in fecal microflora, intolerance to cow's milk protein or lactose, poor feeding technique, and immaturity of the digestive system and still-developing nervous system.

According to Modern:

Some infants may cry continuously for variable periods, often extending to more than 3 hours in a day. He may clench his fists and flex his legs and apparently may make sucking movements. This colic may recur for several days, often more than 3 days a week. The problem usually starts within the first week after birth, reaches a peak by the age of 4 to 6 weeks, and improves considerably after 3 to 4 months. The cause of this colic is not clear. It may be a manifestation of hunger, improper feeding, aerophagy, cow's milk allergy, lactose intolerance, low progesterone level, congenital hypertonicity of the infant, or physiological immaturity of the intestines during early infancy. Colic increases the mother's tension. She should be counseled about the transient nature of the illness. The baby should be fed in an upright position and burped to promote egress of swallowed wind. He should be put in bed on the right side or with face down for 10 to 15 minutes. After excluding any possible organic causes, phenobarbitone, chloral hydrate, analgesics, or antispasmodics may be prescribed for the symptomatic relief of colic, especially if it is causing severe parental anxiety.

Infantile Colic

Infants below three months of age often have paroxysms of sudden crying followed by flushing of face, distension of abdomen and drawing up of lower limbs on the abdomen. They are relieved when feces or flatus is passed. The episodes are of sudden onset and recur generally at the same time each day. Aerophagy, hunger, and overfeeding are often implicated as causes. In some cases, cow's milk allergy may be responsible. The actual cause may not always be apparent.

Treatment: A padded hot water bottle on the abdomen relieves the spasm. Baby should be kept upright or in prone position. Sedatives and antispasmodics help in resistant cases. Mother should be instructed about the correct feeding techniques and burping to prevent aerophagy. The attacks generally disappear by the age of six months.

Psychogenic Abdominal Pain

- In over two-thirds of children with recurrent abdominal pain, no organic cause can be identified. Most of these cases are believed to be functional or psychogenic in origin.

- Disturbed parent-child relationship, too rigid discipline and authoritarian attitude of parents, over-protection, rejection, and sibling rivalry may cause emotional and behavioral disturbances. These children may use abdominal pain as an attention-seeking device.

- Pain is not associated with distress, fever, vomiting, or diarrhea. Pain is vaguely localised in the periumbilical region, usually around the meal time. There are no abnormal physical signs, and the child appears healthy. The child generally has a diminished appetite.

- Treatment: Organic causes should be excluded, and the help of the child guidance clinic should be sought for management.

Etiopathogenesis of colic:

क्षोभात्रासाध्ययनातिप्रसङ्गात् क्षुत्काले चात्यम्भसः पानदोषात् ।
वेगानां व निग्रहाद्यानयानादामाभ्रशसाद्रूक्षधान्याशनाद्वा ॥ ३॥
क्रुद्धो वायुः कर्तनायामतोदैः कम्पाध्मानैराविशन् कुक्षिदेशे।
शूलं पित्तेनान्वितः श्लेष्मणा वा द्वाभ्यां वाऽपि प्रेयमाणः करोति ॥४॥

(Kashyap Samhita, Khila sthana, Shool chikitsa adhyaya 18/3-4)

Due to agitation, fright, overstudy (constant sitting in special posture), abnormality caused by overdrinking of water during the time of hunger, suppression of natural urges, excess movement on vehicles (presence of ama, unmetabolized rasa, and undigested food), falling and eating of dry cereals, the aggravated vayu producing cutting, stretching, pricking (type of pain), tremors, and flatulence; entering the abdomen, getting associated with and excited by both pitta and kapha, produces colic.

Clinical features of colic due to vata, pitta and kapha (different doshas) :

a. Colic due to vata

वाताच्छूलं क्षुधितस्योग्ररूपं घोरैर्वैर्यन्निरुच्छवासकर्तृ ॥५.१॥

(Kashyap Samhita, Khila sthana Shool Chikitsa Adhyaya 18/5.1)

The colic due to vata increases very severely in the hungry one, and during a severe episode produces (causes) arrest of respiration.

b. Colic due to pitta

विद्याद्भुक्ते जीर्यति स्वेददाह तृष्णार्तस्य प्रततं पित्तशूलम् ॥५.२॥

(Kashyap Samhita, Khila Sthana Shool Chikitsa Adhyaya 18/5.2)

The colic due to pitta appears after digestion of food and is associated with trouble of perspiration, burning sensation, and thirst.

c. Colic due to Kapha

मन्दाबाधं स्तिमितं भुक्तमात्रे कफोद्रेकात् स्तम्भहल्लासकर्तृ ॥६.१॥

(Kashyap Samhita, Khila Sthana Shool Chikitsa Adhyaya 18/6.1)

(The colic) due to kapha appears immediately after eating, causes less trouble, is fixed/localized, and due to upward movement of kapha produces rigidity and nausea.

d. Colic due to combination of all dosas

विद्याच्छूलं सन्निपाताच्चतुर्थं सर्वैलिङ्गैर्दुःसहं तत्त्वसाध्यम् ॥६.२॥

(Kashyap Samhita, Khila Sthana Shool Chikitsa Adhyaya 18/6.2)

In the fourth type of colic due to the combination of all three dosas, features of all three dosas are present (which is) unbearable and incurable.

General features of infantile colic

Udarashoola is mentioned as :

- Kosthavibandha (constipation)
- Chhardi (vomiting)
- Stanadamsha (biting the breast)

- Antrakujana (gurgling sound in the abdomen)
- Adhmana (flatulence)
- Pristanamana (bending back)
- Jathara unnamana (elevation of the abdomen).

Rome IV criteria for infantile colic:

1. Age of baby 5 months when symptoms start and stop.
2. Recurrent and prolonged periods of crying, fussing, or irritability that start and stop without obvious cause and cannot be prevented or resolved by caregivers.
3. No evidence of failure to thrive, fever or illness.
4. Caregiver reports crying/fussing for more than hours per day or more than 3 days a week.
5. Total daily crying is confirmed to be > 3 hours when measured by at least one prospectively kept 24-hour diary.

Treatment of colic due to vata

1. Vata is said to be very strong and of excessive force, so being severely aggravated, it destroys the body very quickly. That is why, for the one troubled with colic due to vata, after having received oleaginous massage of the body, the physician should first of all use sudation with tub-bath, poultices, bolus sudation with hot (decoction or paste of) drugs capable of suppressing the vata, or with hot payasa (rice cooked with milk and sugar).
2. The one suffering from colic due to vata should use meat-soups of ena (type of deer), etc., and lava (quail), etc., wild animals/birds mixed with rock-salt: unctuous, hot, and sour substances or hot milk cooked with drugs capable of suppressing the vata; oil, vinegar, supernatant water of curd, and sauviraka (fermented sour drink made with barley and wheat) mixed with sauvarcala salt should be given for drinking to the one suffering from colic.
3. After making a fine powder of syama, sunthi, rock-salt, tumburu, hingu, ksara (svarjikaksara), yava-suka (yavaksara), vida (salt), pravarahwa, and sati, it should be drunk with lukewarm water in colic due to vata.

Treatment of colic due to pitta

1. The one suffering from colic due to pitta, after drinking cold milk or sugar with water, should vomit as per desire.
2. The one suffering from colic (due to pitta) should touch (wear) either the garlands of pearls or pankaja (lotus), which are white like conch-shell, kunda (jasmine flower), and moon, or the pots made with either silver, bronze, sphatika, or gold, filled with water and cooled by mixing candra (camphor).
3. Or else the painful area should be touched repeatedly with leaves of kadali (the patient should use inside the cold house a soft bedspread with a properly arranged row of leaves of bisini already irrigated with water of candana, along with a pillow (made) of opened-up leaves of padma).

General Treatment of Colic:

1. By sages, with their power of meditation, the (recipe) authentic for eradication of colic, atopa (meteorism), tympanites, gulma, etc. diseases is described. Hingu, patha, trikatu, kṣara, rock-salt, citraka, hapuṣa, abhaya, cavya, ajaji, dhanya, puskara (mula), amlavetasa, vrksamla, yavani, dadima, sati, and sauvarcala (salt) should be powdered very fine; drinking this powder with hot water, supernatant water of curd, wine, and asavas cures tympanites, cardiac pain, pain of urinary bladder, and gulma.
2. This very powder mixed with juice of matulunga eradicates pliha (splenomegaly), piles, abnormalities of grahani, cough, dyspnoea, urograha (fixity of chest) and retention of urine.
3. The wise should make fine powders of equal quantity of amlavetasa, vṛkṣamla, yavani, kṣara, citraka, hingu, cavya, ūṣaka, śaṭi, jīvanti, trikaṭu, pippali, pippalimula, badara, sirivarika, nagadanti, and bilva alongwith pancalavana, i.e., five salts (saindhava, sauvarcala, vid, Samudra, and udbhida salts), then (after triturating) with juice of matulunga, make tablets. These, possessing great qualities, should be taken with lukewarm water, wine, or sour drinks in gulma, udavarta (upward movement of vayu), colic, and also in the same way in dysuria, cardiac disorders, and anal prolapse, along with pain of penis and urinary bladder.
4. Vida (salt), dadima, hingu, rock-salt and marica mixed with juice of matulunga should be drunk; it is an eradicator of colic and atopa (meteorism).
5. These (above drugs) mixed with vyosa, prthvika, cavya, citraka, rock-salt, ajaji and pippalimula are most congenial.
6. Sauvarcala (salt), vaca, hingu, tryusana, and haritaki mixed with suresayava eradicate the strength of colic in a moment.
7. The physician should burn in a cauldron one by one the saktu (flour of parched grain) mixed with ghrta, rock-salt, citraka, and vaca, each one pala; after getting burnt, should bring down, drinking of this ksara (alkalies/ash) in appropriate doses mixed with rice-water cures colic and pain of gulma.
8. For the above purpose, the ksara made from eranda mixed with the decoction of pancamula and yava is to be given for drinking.
9. Oil mixed with the decoction of draksa in colic due to vata and mixed with sugar in colic due to pitta, gulma due to pitta, and in pliha (splenomegaly) should be used.

10. The ghrta mixed with milk should be cooked over a low fire with (powders/pastes of) equal quantities of dadima, vyosa, hapusa, prthvika, ksara (swarjikaksara), citraka, ajaji, pippalimula, cavya, dipyaka, and rock salt; (this ghrta) mixed with soup of kola and mulaka cures gulma due to vata. This nectar-like ghrta eradicates colic, tympanites, dyspnoea, cough, and intermittent fever, stiffness of the cardiac region, anorexia, abnormalities of grahani, sula (pain), anemia, etc., diseases, and diseases of yoni (female reproductive organs).

11. The ghrta should be cooked with powders of bilva, kustha, yavaksara, vaca, citraka, rock-salt, eniyaka, vida (salt), vyosa, tintidika, amlaveta-sa, hingu, sauvarcala (salt), ajaji, dadima, indrayava, punarnava, karavi, and hamsapadi along with four times curd, vinegar, and kanji (sour drink) and also juice (decoction) of both pancamula, kola and kulattha. This ghrta destroys colic, gulma due to vata, tremors, nodular swellings, facial paralysis, cardiac rigidity, vata-kundalika (atony of urinary bladder), and giddiness.

12. The ghrta, prepared with milk already cooked with sauvarcala, yavaksara, vaca, tryusana, citraka, haritaki, and vidanga, then mixed with bhadra-rohini and dasanga (dasamula), cures sula (colic) and also eradicates splenomegaly, gulma, parasitic infestation/infection, dyspnoea, cough and hiccough.

13. Satapuspa, vaca, kuṣṭha, pippali, phala, and rock salt, mixed with both sarsapa (should be powdered). After collecting hot water mixed with oleaginous substances, urine, honey, and sour drink (kanji), the wise should mix all these with the above powder (and make a suppository); then apply this suppository. This immediately cures flatulence, udavarta (upward movement of gases), and colic.

DISCUSSION ON MANAGEMENT :

The primary objective of colic management is to use evidence-based measures to systematically alleviate symptoms while preventing secondary complications associated with infantile colic. There is a need to formulate an integrated, multidisciplinary approach to address excessive crying and fussiness observed during the initial 3-4 months of infancy.

A significant contributing factor to colic is aerophagia during feeding, leading to accumulation of air in the gastric region. Burping facilitates the expulsion of this swallowed air, thereby offering symptomatic relief. Similarly, the practice of Pawanmuktasana in infants aids in releasing intestinal gas through the anal passage by applying gentle external abdominal pressure during the maneuver. This results in decreased abdominal distension and lowers intra-abdominal pressure, which in turn mitigates colicky pain.

Therapeutic massage, or Abhyanga, has demonstrated efficacy in reducing the intensity of colic symptoms across various studies. As per Ayurvedic principles, circular massage around the umbilical region is recommended, as it is believed to stimulate the solar plexus and modulate peripheral nerve impulses to the spinal cord. In addition to its physical benefits, Abhyanga exerts a calming effect on the infant's emotional state, and its therapeutic potential can be further augmented with medicated oils. Gentle stroking in the form of Mridu Samvahana promotes relaxation, while strokes applied in the Anuloma direction facilitate Vatanulomana, which may explain the analgesic effect of Abhyanga in infantile colic.

Swedana (fomentation) therapy induces vasodilation, enhancing local arterial perfusion and facilitating venous drainage. In cases where pain is secondary to localized inflammation, this increased circulation delivers essential nutrients, leukocytes, and antibodies to the affected site, contributing to pain reduction. Furthermore, sensory nerve stimulation through Swedana activates the descending pain inhibitory pathway, triggering the release of endogenous opioids such as beta-endorphins and enkephalins.

They act in the substantia gelatinosa of the spinal cord. These neurochemicals block synaptic transmission in the nociceptive pathway by inhibiting the release of pain mediators, thereby providing pain relief.

Ayurvedic texts describe various cold-based therapies for pain management, including Alepa (topical application). The human body contains a significantly higher number of cold receptors compared to warm receptors. Studies indicate that cooling reduces the conduction velocity in mixed peripheral nerves, an effect attributed to Shita and Sthira Guna. Cold application inhibits pain signals by closing the pain gate mechanism. Additionally, cold stimulus itself acts as a counter-irritant, stimulating the release of endogenous analgesics like β -endorphin and enkephalin, leading to further pain reduction. Drugs such as Rasna and Eranda possess Vatahara and Vedanasthapaka properties that contribute to analgesia.

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