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AN AYURVEDIC PERSPECTIVE IN THE UNDERSTANDING AND MANAGEMENT OF UDARASHOOLA (INFANTILE COLIC) IN INFANT

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ABSTRACT

Crying is one of the essential behaviors to communicate the demands of the baby so that it can be fulfilled by the parents. Prolonged crying is a source of anxiety and distress for the parents & challenge for the doctor. Infantile colic is a diagnosis of exclusion for prolonged cry in early infancy. It is described as paroxysmal crying. Infantile colic is one, which exhibits a symptom complex of paroxysmal abdominal pain presumably of intestinal origin associated with severe crying. It usually occurs in infants younger than 3 months of age. The important reason of this symptom is aerophagia. Infantile colic is defined according to wessel's criteria, but symptoms are restricted to crying for more than three hours a day, for more than three days a week, for more than three weeks. *Ayurvedic* classics describes the features of *Udarshoola* (colic) as the child rejects the breast, cries, sleeps in supine position, has stiffness of abdomen, feeling of cold and perspiration on face.

Key words: Infantile colic, *Udarashoola*, Wessel's criteria.

INTRODUCTION

Infantile colic is one of the most common problems encountered by primary care physicians and childcare providers. Prevalence rates in prospective studies varied from 3% to 28% and in retrospective studies from 8% to 40%. The two best prospective studies yielded prevalence rates of 5% and 19%, respectively.[i] Ancient text described the features of *Udarashoola* (colic) as the child rejects the breast, cries, sleeps in supine position, has stiffness of abdomen, (feeling) of cold and perspiration of face.[ii] Whereas other texts described, the significant factor responsible for the genesis of *Shoola* as *Vata (vayu*),[iii] detailed etiopathogenesis about 8 types of *Shoola*,[iv] and the clue for the management of *Udarashoola*.[v]

Definition of the Infantile Colic

Infantile colic is the often described as a behavioral and non- pathological condition in early infancy with crying being the primary symptoms. Crying is a good signal that child is in need but a poor signal of what the child need. Colic is a symptom complex of paroxysmal abdomen pain presumably of intestinal origin and severe crying[vi]. Infantile colic represents a major cause of discomfort and distress for the infant, caregivers, and even healthcare providers

There is much debate as to what infantile colic actually is. The term colic is derived from the Greek word kolikos, an adjective of kolon meaning the large intestine. The word colic suggests that the condition is a manifestation of sometype of abdominal pain or visceral pain, possibly intestinal cramps. This is contentious as the implication that the crying of a colicky infant is a result of the infant experiencing pain that is abdominal in origin is not necessarily true in all infants who cry.[vii]

Udara Shoola is a condition where one express high intensive pain in abdomen.[viii] The pain resembles as though the abdomen is penetrated by a sharp object.[ix] Site of pain is described in the text as *Koshta*[x], which covers various organs like *Agnashaya, Mutrashaya, Raktashaya, Pakwashaya* etc. However, in the present study only *Amashaya* and *Pakwashaya* with relation to abdominal pain is taken for determination of the drug action in the colic. Infantile colic can be defined as per Wessel's criteria i.e. crying for more than three hours a day, for more than three days a week, and for more than three weeks.[xi] Seasonal variations have not been implicated in the pervasiveness of infantile colic.[xii] Some physicians believe that excessive amount of intestinal gas causes abdominal distention and intestinal spasm, often leading to infantile colic.[xiii] The cause of this diurnal rhythm is not known. The amount of crying is not related to an infant's sex; the mother's parity; or the parents' socioeconomic status, education but colicky crying differs from regular crying.

General Etiological factors of Infantile rolic:

Etiological factors mentioned in the Ayurvedic literatures for *Udarashoola* are mostly described for aged individuals. However, Kashyapa Samhita's descriptions on *Udarashoola* features are mere identical with

infantile colic. The causative factors & pathophysiology of *Shoola* are described as follows. A voluntary retention of Flatus, Stool, Urine, over eating, indigestion, eating before the digestion of previous food, over exertion, foods which are incompatible in their combination, drinking water when hungry, use of germinated grains, dry food or cakes of dry meat as well as use of other such foods which aggravates the *Vata Dosha*, are the causative factor of *Shoola*.[xiv] As infantile colic is concerned aerophagia, improper feeding posture of mother, evening time fast feeding from breast, and if mother takes incompatible foods etc. are the reason for *Vata* vitiation and causes colic.

General Pathophysiology of Infantile colic:

The Vayu present in the body gets aggravated because of these etiological factor & produces a violent cutting & spasmodic pain in the abdominal cavity (*Koshtha*). The patient complaints of pain as if he is being pierced with a spear (*Shanku*) inside and of a feeling of suffocation under the influence of that excruciating pain, which fact have determined the nomenclature of *Shoola*.[xv]

General Features of Infantile colic:

In children, features of *Udarashoola* is mentioned as *Kosthavibandha* (constipation), *Chhardi* (vomiting), *Stanadamsha* (biting of the breast), *Antrakujana* (gurgling sound in the abdomen), *Adhmana* (flatulence), *Pristanamana* (bending back), and *Jathara unnamana* (elevation of the abdomen).[xvi] Whereas colic in children is explained as *Stana Vyudasyate* (rejects breast), *Rodana* (cries), *Uttanaschavabajyate* (sleeps in supine position), *Udarasthabdhata* (stiffness of the abdomen), *Shaityam* (coldness), *Mukhasweda* (perspiration of the face).[xvii]

Types of *Shoola*: There are 8 types of *Shoola* mentioned in the classics

1. *Vataja Shoola ; 2. Pittaja Shoola; 3. Kaphaja Shoola; 4. Sannipataja Shoola; 5. Vata pittaja Shoola; 6. Vata kaphaja Shoola; 7. Pitta kaphaja Shoola; 8. Amaja Shoola.*[xviii]

***Upadrava* of *Shoola*-** *Ati Vedana* (Excessive pain), *Murcha* (Fainting), *Gaurava* (Heaviness), *Aruchi* (Anorexia), *Bhrama* (Giddiness), *Jwara* (Fever), *Krishata* (emaciation), *Balahani* (Loss of strength), *Kasa* (Cough), *Shwasa* (Dyspnoea), *Hicca* (hiccup).

Sadhya-asadhyata* of *Shoola *– Eka doshaja-Sadhya; Dwi doshaja-Kashta Sadhya; Sannipataja-Asadhya.*

PHYSICAL EXAMINATION AND LABORATORY INVESTIGATION

Physical examination being with careful observation while the infant is being held on the parent's lap. The infant is observed for lethargy, poor skin perfusion and tachypnea. A rectal temperature greater than 38 degrees Celsius or poor weight gain suggests infection, a GIT disorder or nervous system disorder and requires further work- up. During the examination the infants clothing should be removed to facilitate inspection of the skin

for evidence of trauma and palpation of the large bones for possible fractures, which may indicate abuse.[xix] Laboratory tests and radiographic examination usually are unnecessary if the child is gaining weight normally and has a normal physical examination.[xx]

Samanya Chikitsa* of *Shoola

Vamana (Vomiting)

Pachana (Digestion)

Phala varthi (Suppositories)24

Techniques to reduce crying :

For reducing crying episode soothing the child with a racifier, playing repetitive sounds like soothing music, or placing a warm heating pad on the infant's abdomen helps. Most babies respond to rhythmic rocking or pats on the back. Some likes to be placed on their front. Some babies settle with a car ride. A quiet environment with minimal unnecessary handling and correction of faulty feeding techniques are helpful. The changing of milk formula is usually not necessary.[xxi] Recent studies of the gastrointestinal system provide strong, but indirect, corroborating evidence by suggesting physiologic mechanisms by which maternal smoking can be linked with the offspring's colic. This evidence can be outlined as follows: 1) smoking is linked with increased levels of plasma and intestinal motilin, and 2) higher than average levels of motilin are linked with elevated risk of infantile colic. Although these findings tromp disparate fields provide a cohesive hypothesis for the physiologic mechanism linking maternal smoking with infantile colic, the entire chain of events has not yet been examined among a single cohort, nor has the link between maternal smoking and infantile colic been replicated in a study that simultaneously considers all sources of prenatal and perinatal exposure to tobacco smoke.[xxii]

Medical Care:

i) Ruling out common causes of crying is the first step in treating an infant with persistent crying.
ii) Recommend that the parents not exhaust themselves and encourage them to consider leaving their baby with other caretakers for short respites.
iii) Drug treatment generally has no place in the management of colic, unless the history and investigations reveal gastro esophageal reflux.
iv) Constant follow-up and a sympathetic physician are the cornerstones of management.
v) Although GI factors do not seem to cause colic in most patients, clinicians continue to treat infants with colic based on this hypothesis.

vi) Wessel and colleagues suggested an association between family and infantile tension. Some families with infants with colic may have more problems in their family structure, family functioning, and affective state, compared with families with infants without colic.[xxiii]

vii) A maternal low-allergens diets (i.e., low in dair, soy, egg. peanut, wheat, shell fish) may offer relief from excessive crying in some infants. Lactobacillus reuteri endogenous to the human Gastro Intestinal tract was found to relieve colic symptoms in breastfed infants within one week of treatment. Probiotics may have a role in treatment of infantile colic.[xxiv]

viii) In a polyherbal formulation containing oils of *Carum carvi, Carum copticum* and *Zingiber officinale,* all of which are recommended for the management of infantile abdominal colic is found to be effective as per the study.[xxv]

ix) Some psychodynamic factors may possibly play a role from the prenatal to the postnatal period. Some studies demonstrated that behavioral management was effective in reducing excessive crying. Dealing with family problems and extending help to mothers is an integral part of this management.[xxvi]

PREVENTION

Prevention of attack should be sought by improving feeding technique, including burping providing a stable emotional environment, identifying possible allergenic food in the infants or nursing mother's diet, and avoiding under feeding or over feeding. Colic rarely persists after 3 months of age. Although not serious, it can be particularly disturbing for the parents as well as the infants. Thus a supportive and sympathetic physician can be particularly helpful, even if attack do not resolve immediately.[xxvii]

CONCLUSION

Varieties of etiological factors are observed as the expected reason for infantile colic. It is more common among the first born. Incidence of infantile colic is mostly seen in the infants up to 3 months of age. The parents should be aware about the importance of feeding a hungry baby, changing wet diapers, and comforting a baby who is cold and crying as a result of these factors. Soothing music accompanied with parental attention (including eye contact, talking, touching, rocking, walking, and playing) may be effective in some infants and is never harmful. Proper attention towards the infant with the traditional practice and burping after each feed helps a lot to reduce the incidence.

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