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"UNDERSTANDING THE ETIO-PATHOLOGICAL ASPECT OF UDARASHOOLA WITH ITS MODERN CORRELATIONS"

Dr. Kumari Nikita*[1],Dr. (Prof.) Shailaja U[2], Dr. Vijayalaxmi Mallannavar[3], Dr. Amlesh Kumar[4]

[1]PG Scholar, Department of Post Graduate studies in Kaumarabhritya, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan 573201, Karnataka, India, Email: dr.krnikta@gmail.com

[2]Professor and HOD, Department of Post Graduate studies in Kaumarabhritya, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India

[3]Associate Professor, Department of Post Graduate studies in Kaumarabhritya, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India

[4]Assistant Professor, Department of Ayurveda Samhita Evam Siddhant, Government Ayurvedic College, Kadamkuan, Patna, Bihar, India

ABSTRACT

Udara Shoola is a condition where one express high intensive pain in abdomen. The pain resembles as though the abdomen is penetrated by a sharp object. Site of pain is described in the text as Kosta, 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. In ayurvedic literature there is an explanation regarding the origin of Shoola. The story is given like this, once upon a time lord Shiva became angry on Kamadev owing to certain reason. With a desire to destroy him lord Shiva had thrown his Trishula towards Kamadev. For the protection of his body fearful Kamadev entered to the body of lord Vishnu. When that Trishula came near Lord Vishnu, Vishnu uttered one Hum-kar (protection sound).After that Trishula fell down on the earth just like a syncope person. During its fall on earth the sharp edge of the Trishula pierced the earth causing Shoola. Afterwards the same was transferred to the people living in the earth as Shoola.

Key Words: Udara Shoola, Agnashaya, Mutrashaya, Raktashaya, Pakwashaya

INTRODUCTION

It is the past that has created the present. Knowing the history of the disease gives us the knowledge regarding the origin of the disease, presentation of the disease during those days and our ancestor's knowledge about them. Some of the historical evidence is available regarding the disease Udara Shoola. Information about the disease available from Vedic period to Modern period. Samhita period is considered as the golden era of Ayurveda. Samhita period is an important period during which, several prominent Ayurvedic texts were written, they include Charaka Samhita, Sushruta Samhita, Bhela Samhita, and Harita Samhita.

- Acharya Sushruta described Udara Shoola in detail, in his Uttarasthana. He has mentioned Nirukti, Nidana, Samprapti, Bedhas, & Treatment of Udarashoola.
- Yogaratnakara in detail mentioned about Shoola Nirukti, Paribhasha, Sankya, Nidana, Samprapti, Sadyasadyata, Upadrava, & Chikitsa in Shoola Nidana Chikitsa prakarana.

- Kashyapa Samhita: Shoola specific to infants with its diagnosis approach is mentioned in vedana adhaya of kashyapa samhita.
- Madava Nidana, we can find the similar description of Yogaratnakara about shoola.
- Sangraha Kala (800 AD-1700AD) Astanga Hridaya mentioned in detail about features of abdominal pain in children.

The description of the disease, udara shoola associated with many abdominal pathology presenting with pain in abdomen, commonly refer to as shoola. Its extensive description is available in Ayurveda.

TYPES OF SHOOLA

There are 8 types of Shoola mentioned in the classics

- Vataja Shoola
- Pittaja Shoola
- Kaphaja Shoola
- Sannipataja Shoola
- Vata pittaja Shoola
- Vata kaphaja Shoola
- Pitta kaphaja Shoola
- Amaja Shoola

ETIOLOGICAL FACTORS OF UDARASHOOLA

Etiological factors mentioned in the Ayurvedic literatures for Udara shoola are mostly described for aged individuals. However, Kashyapa samhita's descriptions on Udara shoola 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.

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.

PATHOPHYSIOLOGY OF UDARASHOOLA

Acharya Sushruta had mentioned general pathophysiology for Shoola. The Vayu presents in the body gets aggravated because of the etiological factor & produces a violent Cutting & Spasmodic pain in the cavity of the Trunk (Kosta). The patient complains of pain as if he is being pierced with a Spear (Shanku) inside & of a feeling of suffocation under the influence of that excruciating pain, which influence that fact have determined the nomenclature of Shoola.

General Features of Udara Shoola

In children features of Udara Shoola is mentioned are as follows.

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Koste Vibanda (constipation)

Vamathu (vomiting)

Sthana Damsha (biting of the breast)

Antrakujana(Gurgling sound in the abdomen)

Adman (Flatulence)

Pristanamana (bending back)

Jataraunnamana (Elevation of the abdomen) 20

Whereas colic in children is explained as follow-

- Sthana Vyudasyate (rejects breast)
- Rauti (cries)
- Uttana schava bajyate (sleeps in supine position)
- Udara Sthabdata (stiffness of the abdomen)
- Shytyam (coldness)
- Mukaswedascha (perspiration of the face)

Acharya Sushruta mentioned general features of Udara Shoola as

- Kosta shoola (pain in abdomen)
- Nichwasa Bhavati Vedana (Inspiration causing pain abdomen)

Upadrava of Shoola

- Ati Vedana (Excessive pain)
- Murcha (Fainting)
- Gaurava (Heaviness)
- Aruchi(Anorexia
- Bhrama (Giddiness)
- Jwara (Fever)
- Krishata (emaciation)
- Bala hani (Loss of strength)
- Kasa (Cough)
- Shwasa (Dyspnoea)
- Hicca (hic-cup)

Sadya-asadyata of Shoola

- Eka doshaja-Sadya
- Dwi dpshaja-Kasta sadya
- Sannipataja-Asadya

Samanya chikitsa of Shoola

- Vamana (Vomiting)
- Pachana (Digestion)

- Phala varthi (Suppositories)

MODERN REVIEW: 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. 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. The most universally accepted definition of colic and one which is most used in clinical research in that proposed by wessel et al. in a study involving 180 mothers and their infants. The inclusion criterion for this study was 'paroxysms of irritability, fussing or crying lasting for a total of more than 3 hours a day and occurring on more than three days in any one week" in an infant who was otherwise "healthy and well fed".

Helseth and Begnum proposed a comprehensive definition of crying that incorporates the three categories of crying that is intensive crying, nonspecific fussing and crying, feeding – related crying are detected in their study.

Crying; The principle symptoms of colic are crying. However, all neonates and infants cry and there is a daily variation in the amount of crying and the pattern of crying between infants. A more recent study by St. James-Roberts and Halil also established a baseline standards for normal infant crying with following characteristics:

Crying is at its maximum in the first months and an average of about 2 hours crying per day is expected. These average halves between 4 and 12 months, crying peaks at about six weeks, with individual variation. In the first three months, the crying clusters in the late afternoon and evening. The hours between 6.00pm and midnight account for 40% of the 24 hours total. In addition to crying, other symptoms and signs that may be associated with colic includes crying that is difficult to console, feeding problems including spitting, vomiting and crying with feeding, poor sleep, passing a lot of gas.

Other signs apart from crying that may be observable during a physical examination includes:

- Drawing up of legs
- Abdominal distension
- Hyper tonicity
- Arching
- Flushing

These activities and motor behaviors are nonspecific and in infant may be observed as accompanying crying in infants in general.

Onset and duration of colic:

The onset of colic has been reported to be between three days to three week of age with a mean of 1.8 weeks. Premature infants develop colic later than full term infants.

ETIOLOGY OF COLIC

Although the cause of colic is unclear, there are numerous hypotheses in two broad headings- Physiological factors, ranging from cow's milk intolerance, immaturity of the gastrointestinal system to immaturity of the gastrointestinal system to immaturity of the central nervous system. Non- physiological factors, such as difficult infant temperament, inappropriate maternal response and deficiencies in parenting.

CLINICAL FEATURES OF INFANTILE COLIC

- 1-6 months of age (less seen in frequently aged between 7-12 months)
- Paroxysmal fuss, cry pattern which are not easily consoled
- High intensity, piercing cry are common
- Crying peaks in evening, but may occur throughout the day
- Many episodes of crying as well as long bouts of crying
- Feeding patterns like breast, formula or mixed feeding problems is common
- Sleep disorder is common

PHYSICAL EXAMINATION AND LABORATORY INVESTIGATION

Physical examination being with careful observation while the infant is being held on the parents lap. The infant is observed for lethargy, poor skin perfusion and tachypnea. A rectal temperature greater than 38 degree 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. Laboratory tests and radiographic examination usually are unnecessary if the child is gaining weight normally and has a normal physical examination.

MANAGEMENT

The goal of management should be used appropriate technique for systematic resolution of problem and to prevent secondary complication due to infantile colic. Infantile colic is very common, although there is no consensus about the most effective treatment. According to Bahrami, Kiani and Cohen-silver and Ratnaplan treatment based on the following factors have been- drug, dietary therapy, behavioral therapy, complementary and alternative therapy.(Table)

Table.1-Management technique for infant with infantile colic

NO TECHNIQUE

- Drug
- Dietary therapy
- Complementary and alternative therapies
- Behavioral therapy

DRUG –

- Simethicone
- Anticholinegic drug
- Probiotics
- Melatonin
- Simethicone

Simethicone reduces intraluminal gas and is promoted as an effective treatment for infantile colic. However, according to Savino of three randomized controlled trials done on Simethicone only one showed some benefit for infantile colic.

Anticholinegic drug

It is reported that the use of Anticholinergic drugs such as dicyclomine hydrochloride and dicycloverine showed to be effective in reducing an increased gut peristaltic activity. The following side effects have been reported: drowsiness, constipation, loose stools and more serious side effects such as difficulty in breathing, seizures, syncope, asphyxia, decreased muscle tone and even coma.

Probiotics treatment

Probiotics are live microorganism that when administered in adequate amount confer a exert benefits in human health. Microbes colonize humans body's ecosystem. These microbes play an extremely important role in the development of intestinal cells and participate in the maturation and function of the innate immune system.

Although there's still a lots to learn about this microbes , its known that each person has its own singular microbes population that colonize different parts of the body, one of these parts is the intestinal tract .These are usually stable, though some condition may affect this population as antibiotics, immunosuppressant, and diarrhea, between many other, returning to normal without any intervention after having been disturbed.

The probiotic submitted to more tests to assess its effectiveness in colicky babies is the Lactobacillus group. Results showing decrease in daily median crying time(177min to 145min) and there were no adverse effects(52).

CONCLUSION

Udara Shoola is a condition where one express high intensive pain in abdomen. The pain resembles as though the abdomen is penetrated by a sharp object. Site of pain is described in the text as Kosta 14, 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. According to this study two trials have been done comparing sucrose solution and placebo. In both these trials sucrose solution seemed to be of benefit to colicky infants. The first trial showed an eighty nine percent improvement in infants receiving sucrose compared to thirty two percent of those receiving placebo. The second trial measured the effect of sucrose on non-colicky and colicky infants. Both groups responded positively to the sucrose. Sucrose does seem to help, but only

has a short period of effectiveness. In both these studies the relief from the sucrose solution only lasted between three and thirty minutes on average. Even though there are many myths and misconceptions about the intake of sucrose, in small volumes prior to acute painful procedures, it has been found to be a safe, effective, economic and feasible pain reducing solution.

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