



REVIEW OF SHOOLA WITH SPECIAL REFERENCE TO MADHAV NIDAN

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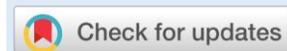
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ABSTRACT

Ayurveda, the science of life not only emphasises the curative aspect of disease but also gives knowledge about the prevention of disease. The Ayurvedic diagnostic approach comprises *Rogi Pariksha* and *Roga Pariksha* separately. A proper diagnosis forms the basis for appropriate treatment whereas ignorance of it leads to haphazard. So, diagnosis of the disease comes first. *Shoola* is the commonest symptom mentioned in Ayurvedic text produced due to the prominence of *Vata* either due to *Margavarodha* or due to *Swatantra Vata Prakopa*. Madhavkar is the first who mentioned a special chapter describing *Shoola* is a *Swatantra Vyadhi*. He also elaborates on different types of *Doshaj Shoola* along with *Amaj*, *Parinama Shoola* and *Annadrava Shoola*. An attempt is made to review the *Shoola* from various ayurvedic texts with special reference to Madhav Nidan. Before initiating any treatment, it is necessary to differentiate the *Shoola* as a disease or as a symptom. *Shoola* explained by Madhavkara specifically explains *Udarshoola*. With the help better understanding of pathogenesis and proper diagnosis of the disease, its treatment can be planned.

Keywords: *Annadravashoola*, *Parinamashoola*, Pain, *Shoola*,

INTRODUCTION

Ayurveda, the science of life not only emphasises the curative aspect of disease but also gives knowledge about the prevention of disease through *Sadvrutta* [1]. Human beings are more prone to diseases even after following the *Dincharya*, *Rutucharya* etc. According to Ayurveda, the disease is a state of the body and mind that gives pain and discomfort to a human being. For treating the disease *Hetu* (cause), *Linga* (symptoms) and *Aushadha* (medicine) are the *Trisutra* mentioned in Ayurveda [2]. Out of these three *Sutra*, two are meant for diagnosis of disease and the third one is meant for treatment purposes. Also, it is stated that a physician should first diagnose the disease and then select the proper medicine for the treatment of the disease [3]. The Ayurvedic diagnostic approach comprises *Rogi Pariksha* and *Roga Pariksha* separately. *Roga Pariksha* includes *Nidana panchaka* namely *Nidana*, *Purvaroopo*, *Roopa*, *Upashaya* and *Samprapti* [4]. *Roga Pariksha* is not only important rather it is the foremost part for diagnosis of diseases. Knowledge of *Nidana Panchaka* is not only useful for the diagnosis of disease but also gives information about prognosis, treatment, and differential diagnosis of the disease. A proper diagnosis forms the basis for appropriate treatment whereas ignorance of it or improper diagnosis leads to hazardous. So, the diagnosis of the disease comes first. Like *Jwar*, *shoola* is the most common *Purvaroopo* (prodromal symptoms) or *Roopa* (signs and symptoms) or *Upadrava* mentioned in several diseases. But there is no special chapter for *shoola* in the *Brihatrayee* of Ayurveda. Discrete description of it is observed in several chapters during the description of the disease, either as *Purvaroopo* (prodromal symptoms), *Roopa* (signs and symptoms) or *Upadrava* (complications). From the very beginning in the *Bheshaja Chatushka* of Charaka, there are different medicinal preparations for the management of pain in different parts of the body. Likewise, in the Charaka *Sutra Sthana* fourth Chapter, there are two *Mahakashaya* directly mentioned for the management of pain i.e. *Shoola Prashamana* and the *Vedanasthapano*, also there is another one that directly relates to

pain management as *Angamarda Prashamana* [5]. Sushruta has explained *Shoola* as abdominal pain in his *Uttar Tantra* [6]. He has also explained *Shoola* as the main *Upadrava* (complication) of *Gulma* in the same chapter. In Madhava Nidana, for the first time a special chapter is mentioned for *Shoola* after *Amavata Nidan* [7]. It may be due to the presence of a characteristic type of pain in *Amavata*. In all types of *Shoola*, *Vata* is the predominant causative factor. Considering the importance of *Shoola* in the diagnosis of disease an attempt is made to review *Shoola* from classical Ayurvedic text with special reference to Madhav Nidan. Madhavkar (16th century A.D.) is the first who explains *Shoola* as *Swatantra Rog*. He also elaborates its different *Doshaj* types along with *Anadrava Shool* and *Parinam Shoola*. From this review and critical analysis, it can be concluded that *Shoola* is the most common *Purvaroopo*, *Roopa* or *Upadrava* indicating various disease pathology. Before initiating any treatment, it is necessary to differentiate the *Shoola* according to its cause, site, *Doshaprabalya* or as per *Upashya-Anupashaya*. Thus, the proper diagnosis of disease leads to proper planning of treatment.

AIM AND OBJECTIVE: To review and analyse the literature regarding *Shoola* from the ayurvedic text.

MATERIALS AND METHODS: -

MATERIALS: - *Brihatrayee* and *Madhav Nidan* along with their commentaries and few elementary textbooks, research journals and articles.

METHOD: - Collection of information from the Ayurvedic text and research articles. Analysis of data was carried out.

REVIEW OF LITERATURE

A. Definition: According to Vriddha Sushruta, pain in the abdomen resembling "*Shanku Sphotanavat*" i.e., pricking pain due to iron hook piercing in the abdomen is called *Shoola* [8].

B. The etymology of Shoola: *Shoola* is a *Pullingi Shabda*. It conveys the meaning of *Rujayam*, *Vyathayam* [9]. Ayurvediya *Shabdakosha* indicates the different contexts wherein the word is used in the classics as a *Lakshana*, *Ruja* or *Roga* [10]. As

per Moinier Williams, *Shoola* is any sharp or acute pain especially that of colic /gout pain, sorrow, grief ^[11]. Sushruta mentions *Shoola* is a condition where the patient experiences the sharp intensity of pain as if pierced with *Shanku* i.e. *Keelaka* or *Kantaka*.

C. Mythological Review:

According to Madhav nidana, once when lord *Shiva* was furious due to the disturbance produced by *Anang (Kamadeva)* during his meditation, he threw his *Trishula* towards *Kamadeva*. To escape from the attack of *Trishula*, *Kamadeva* entered lord *Vishu's* body. To protect him, *Vishudev* heaved, and his sigh made the *Trishula* fall on the earth and there is created *Shoola*. As it is originated from *Trishula* it is called *Shoola* ^[12].

This condition has not been mentioned in any of *Brihatrayee*. Later Acharyas of *Laghutrayee* have explained *Shoola* as a separate entity.

D. Synonyms of *Shoola*: There are different synonyms related to Pain in Ayurveda i.e.-*Shoola*, *Rooja*, *Rook*, *Vedana*, *Arati* etc.

E. Samhita Review

Charak Samhita:-

In *Sutra Sthana* "*Shoola Prashamana Gana*" is mentioned ^[5]. *Viman Sthana* mentions *Amatra Bhojana* leading to *Shoola* ^[13]. *Gulma* is designated as a *Vedana Pradhana Vyadhi* ^[14]. *Shoola* is explained as a *Lakshana* in *Vataj Grahani* ^[15]. *Shoola* is also a *Lakshana* of *Prakupita Vata* in the *Kukshi*. *Shoola*, *Gulma* are seen in *Kosthashrit Vata* ^[16]. *Amashayagata Vata* and *Pakvashayagata Vata* also have *Shoola* as their symptom. Among *Avruta Vata*, *Pittavruta Vata*, *Kaphavruta Vata* ^[17] and *Samanavruta Apana* have *Shoola* as a *Lakshana*.

Sushrut Samhita

Sushruta has explained *Shoola* as abdominal pain in his *Uttar Tantra* ^[7]. He has also explained *Shoola* as the main *Upadrava* (complication) of *Gulma* in the same chapter. *Parshva-Shoola*, *Kukshi Shoola*, *Hrit Shoola*, *Basti* and *Mutra Shoola* and *Annaj Shoola* are also mentioned by Sushruta.

Ashtang Hruday

Just like Charak no special chapter on *Shoola* is mentioned in *Ashtang hruday*.

Madhav Nidan

Madhavakara is the first author who mentioned an independent disease status to *Shoola* ^[8].

F. Nidan Panchak

Hetu^[18]:

According to Ayurveda, all types of *Ruja* are considered under *Vata* aggravation. Pain can only occur if the *Vata* is vitiated. So, the causes responsible for *Vatavyadhi* can be considered for vitiation of *Vata Dosha*. These causes can be divided into two groups:

1. *Swatantra Vata Dosha Prakopak Hetu And*
2. *Paratantra Vata Dosha Prakopak Hetu.*

Vegasandharana (suppression of natural urges) and *Marmabhighata* (trauma to vital organs) etc. are examples of *Swantra Vata Dosha Prakopak Hetu*. Whereas *Divaswapna* (day sleep) does not directly lead to vitiation of *Vata*. However, it leads to the formation of *Ama* and causes *Vata* vitiation indirectly by obstructing *Vata*. Due to this, *Vata* gets vitiated and brings *Rukshata*, *Laghava*, *Kharatva* which causes symptoms of pain, leading to various generalized or localized disorders.

Samprapti ^[18]: Deranged and aggravated *Vata Dosha* get accumulate at the site where *Khavaigunya* is present and produces *Shoola* (a spasmodic pain) in the *Koshtha* (abdominal cavity). A patient complains of *Shanku Spotanvat* (piercing pain), hence named as *Shoola*.

Purvaroop ^[18]: - as it is a *Vatavyadhi*, indistinct manifestation of the diseases can be considered as prodrome symptoms.

Following are the *Vyadhi Ghatakas* considered in the pathogenesis of *Shoola*.

Dosha:- *Tri-Dosha*, Predominantly *Vata*, **Dushya:-** *Rasa Dhatu*, **Strotas:-** *Annavaha*, **Agni:-** *Jatharagimandya*, **Aam:-** *Jatharagnimandya Janit.*, **Strotodushti :-** *Atipravrutti Or Sangapradhan*

Type of Pain /Shoola according to Ayurveda: -

1) Sushruta:- *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja*, *Parshva Shoola*, *Kukshi Shoola*, *Hrit Shoola*, *Basti*

Shoola, Mootra Shoola, Vit Shoola, Avipaka/Anna Dosaja Shoola^[19].

2) Madhavakara:- *Vataja, Pittaja, Kaphaja, Vatapittaja, Vata-kaphaja, Pitta-kaphaja, Sannipataja, Amaj, Parinama Shoola* and *Annadrava Shoola*. *Parinama Shoola* and *Annadrava Shoola* closely resembled to peptic ulcers and have strong relationships with food intake. In all types, *Vata* is the predominant causative factor.

Parinama Shoola²⁰:-

Parinama shoola term is a self-explanatory i.e. *Shoola* or abdominal colic that is experienced during the digestion of food i.e. 3-4 hours after intake of food when food had reached the intestines. *Parinama Shoola* is an *Avaranjanya Tridoshaja Vyadhi*.

Synonyms:- *Annadrava Shoola, Paktidoshaj Shoola, Annavidahaja Shoola*.

Samprapti:- *Vata* being vitiated by *Swanidan* which in turn does the *Avarana* of *Kapha* and *Pitta* leading to *Parinama Shoola*.

Lakshana:- Abdominal pain precipitates and aggravates during digestion of food and get relieved after digestion of food or by *Vaman* or after intake of food. The common sites of pain include *Kukshi* (Epigastric region), *Jathara-Parshva* (Right and Left Hypochondria), *Nabhi* (Umbilical region), *Basti* (Hypogastric

region), *Stanantra* (Retrosternal) etc. As per Madhav Nidaan, *Parinaam Shoola* has also been described as *Durvigneya Mahagada*.

Madhavakara has described seven types of *Parinama shoola* viz. *Vataj, Pittaj, Kaphaj*, three *samsargaja* and one *Sannipataj*.

Annadrava Shoola²¹:-

Annadrava Shoola is described as a type of *shoola* by Acharya Madhav having the characteristic features of pain before and during digestion of food and that relieves after vomiting. *Annadrava Shoola* is explained as due to *Vata Prakopa*, the aggravated *Vata Dosha* encircles nearby located *Pitta* and *Kapha Dosha* in the *Koshtha* and becomes powerful enough to produce colic pain during the digestion of ingested food and *Kapha* breaks down from its location and interact with *Pitta* and combines with *Vata* to cause colic pain during the transformation process of the consumed food and this typical *Shoola* is known as *Anndrava Shool*.

Lakshana:- Burning sensation in the epigastrium, Pain before a meal, during digestion or any time and is continuous. It relieves after vomiting.

In modern science, these can be correlated with peptic ulcers.

Table 1: Types of *Shoola* and their symptoms

Type of Shoola	Site	Nature of Shoola	Associated symptoms	Aggravating Factors	Relieved by
<i>Vataja</i>	Pain in heart, flanks, back, waist and urinary bladder	Pain increases or decreases on its own accord frequently, Pricking or tearing type	Obstruction to stool and flatus	During cold weather, in the evening, during or after digestion of food, cloudy and cold weather	Hot fomentation, oil massage, Fatty and warm foods and drinks.
<i>Pittaja</i>	Near umbilicus	Burning sensation	Thirst, confusion, perspiration, fainting, giddiness	During mid-day, midnight, digestion, in the rainy season	Cold substances like cold drinks and cold exposure, sweet foods and sweet drinks
<i>Kaphaja</i>	Pain near the stomach with stiffness loss of movements	Dull aching pain	Heaviness in head, nausea, cough, debility, Anorexia, Salivation	Severe in morning at sunrise, in <i>Sishira</i> and <i>Vasanta</i> , and after taking food	--
<i>Vatapittaja</i>		Severe pain	Burning sensation and	--	--

			fever		
<i>Kapha-pittaja</i>	Abdomen, heart and centre of the umbilicus	--	--	--	--
<i>Kapha-vataja</i>	Heart, sides of chest and back	--	--	--	--
<i>Sannipataja</i>	--	Severe pain	--	Severe form during all the times	--
<i>Amaj Shoola</i>	--	Associated with Gurgling sound in the intestine	Nausea, vomiting, heaviness, rigidity, distension of abdomen salivation also other symptoms like <i>Kaphaj Shoola</i>	--	--
<i>Parinama Shoola</i>	<i>Kukshi, Jathara-Parshva, Nabhi Basti, Stanantra</i>	During digestion of food	As per the predominance of dosha	Digestion of food	After digestion of food or by <i>Vaman</i> or after intake of food
<i>Annadrava shoola</i>	In the epigastrium	Continuous and severe pain	--	Pain before a meal, during digestion or any time	It relieves after vomiting

G. Modern Review of abdominal Pain

Pain in the abdomen is the single most important symptom of an acute abdominal pathologic process. It is the symptom that brings the patient to his physician and the symptom that deserves the utmost care in evaluation.

Abdominal pain occurs when mechanical or chemical stimuli trigger the pain receptors in the abdomen. Stretch is the primary mechanical stimulus. Other mechanical stimuli, such as expansion, contraction, compression, pulling, and twisting of the viscera, also induce pain.

Types of Abdominal Pain

Visceral Pain

Visceral pain is considered a vague and dull pain because the majority of organs and the visceral peritoneum do not carry an abundance of nerve fibres for pain. Foregut structures (stomach, duodenum, liver, and pancreas) cause upper abdominal pain. Midgut structures (small bowel, proximal colon, and appendix) cause periumbilical pain. Hindgut structures (distal colon and genitourinary tract) cause lower abdominal pain.

The patient may experience mild pain that is poorly localized, with the exact location difficult to pinpoint.

Parietal Pain

Parietal pain, or somatic pain, occurs when there is an irritation of the parietal peritoneum that lines the abdominal cavity. Somatic pain comes from the parietal peritoneum, which is innervated by somatic nerves, which respond to irritation from infectious, chemical, or other inflammatory processes. Somatic pain is sharp, constant, severe, and is easily localized.

Referred Pain

Referred pain is perceived distant from its source. It is poorly localized but normally constant. It occurs when organs share a common nerve pathway.

For example, the pain due to phrenic nerve irritation is referred to as the ipsilateral shoulder. The phrenic nerve has the same nerve value (C3–C5) as the cutaneous nerves supplying the shoulder. Therefore, when afferent nerves transmit the information to the brain, the brain misinterprets and localizes the pain to the shoulder when, in fact, the problem lies within the phrenic nerve and not the shoulder.

Common examples of referred pain in the human body are as follows:

- Referred pain of a ureteric stone into the groin
- Acute myocardial infarction pain referred to the left arm and jaw

The differential diagnosis of abdominal pain varies widely, ranging from benign to life-threatening conditions, so a stepwise approach is required to identify the exact cause and its severity.

DISCUSSION

Shoola is a common symptom in most diseases. *Shoola* is termed as *Ruk*, *Ruja*, *Vedana* etc in various diseases as *Purvaroop*, *Roopa* or *Upadrava*. No special chapter described *Shoola* as *Swatantra Vyadhi* in *Brihatrayee*, but Sushruta is the first who described *Shoola* as *Upadrava* of *Gulma* or may be present without the complication of *Gulma*. Sushruta explains *Doshaj Shoola* and also the *Shoola* according to the site of affection. Madhavkar is the first who mentioned a special chapter describing *Shoola* is a *Swatantra Vyadhi*. He also elaborated on different types of *Doshaj Shoola* along with *Amaj*, *Parinama Shoola* and *Annadrava Shoola*. *Shoola* is the predominant sign produced due to vitiation of *Vata Dosha*. Vitiation of *Vata* may be due to *Swantara Vata Prakopaka Hetu* or due to *Maragavarodha*. Various causes of *Margavarodha* or *Avaran* are *Mala*, *Sama Dosha* or *Shalya*. In Madhav Nidan *Shoola Vyadhi* specifically indicate *Udarashoola*. In Madhav Nidan, the disease *Shoola* is mentioned after *Amavata Nidan* in which there is a predominant or characteristic type of *Shoola* (*Vruchikdansha Vata vedana*). Considering the importance of *Shoola* a separate chapter has been explained on this symptom. In the *Samprapti* of *Shoola Vata* vitiation is of utmost importance. *Vata Dosha* gets vitiated either due to *Swatantra Hetu* like *Ati Ruksha Annasevan*, *Vegavidharan* or *Paratantra Hetu* includes *Samadosha*, *Mala Sanga* or *Shalya* etc. vitiated *Vata* gets lodged at the site where there is *Khavaigunya*. Some characteristics attributed to pain are site, character, associated symptoms, timing (duration, course and pattern) exacerbating and relieving factors, severity and onset. First is the site i.e *Ashraya*

of *Shoola*. If it is in *Kati Pradesha* then *Vata Dosha* is predominant, in umbilical region *Pitta Pradhan* and if near the stomach region then *Kapha Pradhanta* should be considered. The site also gives information about the *Vikalpa Samprapti* of *Shoola*. *Shirashoola* indicates the involvement of *Prana Vayu*. If there is a pain in the flanks, it will be *Udana Vata Vaigunya*. Abdominal colic, there is an involvement of *Samana Vata*. The second factor is character. i.e different types of *Shoola* like *Ruja*, *Toda*, *Bheda* etc are mentioned in classics related to *Vata Pradhanya*, burning or *Chosh* or *Osh* represents *Pitta Pradhanya*, whereas *Manda* or dull pain and *Angamarda* represents *Kapha Pradhanya*. Gurgling sound in the intestine is associated with *Amaj Shoola*. The third factor is associated symptoms i.e if the *Shoola* is associated with *Swapa* which is a *Kaphaja Bhava* (numbness), If the *Shoola* is associated with *Daha*, which is a *Pittaja Bhava* and *Vida- Vata Stambha* (Obstruction to stool and flatus) then *Vata Dosha* should be considered as prime. The fourth factor is timing, if the pain aggravates in the morning, then the condition is *Kaphanubandha Vataja Shoola*. If it aggravates in the afternoon, *Pittanubandha* is there and if it aggravates at night, it will be mostly *Kevala Vatika* in nature. Also the pattern of *Shoola*, i.e. if the pain is intermittent or fluctuating then it's *Kevala Vatika* because *Vata Dosha* is having *Vishama Vega*. If the pain is the acute onset and with severe intensity then it is having *Pittanubandha* and if the pain is dull, it is showing *Manda vega* and is having *Kaphanubandha*.

The sixth factor is exacerbating and relieving factors. i.e the concept of *Upashaya* and *Anupashaya* in Ayurveda. like in the case of *Vataja Shoola* it gets aggravated During cold weather, in the evening, during or after digestion of food, cloudy and cold weather, whereas get relieved by hot fomentation, oil massage, fatty and warm foods and drinks. *Annadrava Shoola* having the characteristic features of pain before and during digestion of food and gets relieved after vomiting. While in *Parinama Shoola* abdominal pain precipitates and aggravates during digestion of food and get relieved after digestion of food or by *Vaman* after food. The seventh factor is the severity and in case of

severe pain, *Vata-Pittaj* or *Sannipataj Shoola* is considered. Thus, depending upon the diagnosis, the management of *Shoola* can be aimed at removing causative factors and normalising the *Prakupita Vata* to relieve the pain.

CONCLUSION

Shoola is the commonest symptom mentioned in Ayurvedic text produced due to the prominence of *Vata* either due to obstruction or due to *Swatantra Vata Prakopa*. *Shoola* explained by Madhavkar after the *Amavata* specifically indicates the *Udarshoola*. It includes all the pathological conditions caused due to visceral, somatic or referred pain. Some characteristics attributed to pain are site, character, associated symptoms, timing (duration, course and pattern) exacerbating and relieving factors, severity, onset and comprehensive patient history for an accurate diagnosis. Normalising the *Prakupita Vata* is the hallmark feature of pain management in Ayurveda. As pain is both a physical and psychological effect, normalizing the *Shareerika* and *Manasika Dosha* helps in attaining a pain-free state. It is to be noted that this *Shoola* could not get full disease status even in today's modern medicine, as the *Shoola* is considered a major symptom of various diseases occurring in the gastrointestinal tract.

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