



ORIGINAL RESEARCH PAPER

Ayurveda

CONCEPTUAL STUDY OF *KLOMA* WITH REFERENCE TO MODERN PERSPECTIVE

KEY WORDS: Koshtanga, Phuphusa, Udakvaha strotas.

Dr. Karan R. Gupta	PG Scholar, department of Rachana Sharir, Mahatma Gandhi ayurveda medical college hospital and research centre
Dr. Gaurav Sawarkar*	Associate Professor Department of Rachana Sharir, Mahatma Gandhi ayurveda medical college hospital and research centre *Corresponding Author
Dr. Priti Desai	HOD & Professor Department of Rachana Sharir, Mahatma Gandhi ayurveda medical college hospital and research centre

ABSTRACT

There are numerous points in *Sharir* darkened and not explained till date. The ambiguity in some topics is due to their scattered and fewer descriptions. The *Kloma* which is one of the roots of *Udakvaha Srotas* is additionally an indefinite organ. A difference of opinions is found in Ayurvedic content with respect to the *Kloma*. A few organs which are generally considered in context of *Kloma* are *Pittashaya*, *Agnayashaya* and *Phuphusa*. Numerous creators and research scholars take a shot at subjects identified with *Kloma*. Yet the ambiguity about *Kloma* isn't resolved. While studying writing related *Kloma* particularly through *Sushruta Sharir* it was seen that till date there is no conclusive sentiment about *Kloma*. So to explain the anatomical area of *Kloma* and specify *Kloma* with body organ was the prime plan to start this review.

INTRODUCTION:

Ayurveda is a holistic medical science with its established theories and principles. The principles of *Ayurveda* are so strong that they do not change with respect to time. *Ayurveda* is a comprehensive system of health care of great antiquity based on experimental knowledge and grown with eternal additions.

Sushruta has rightly said that the proficient learner must clear all his doubt through learning theoretical and practical aspects of *Rachana Sharir* and should proceed for the treatment of patient so the study of *Sharir* is inevitable.¹

Srotasa is also one of the prime concepts described by ancient Acharya in their respective compendia. The *Srotasa* are well defined by Acharya *Sushruta* in *Dhamanivyakaran* Chapter of *Sharir* while Acharya *Charak* has given Separate fifth chapter *Srotovimana* in *Vimanasthana*.²

Among *Srotasa*, *Udakvaha Srotasa* is said to be prime *Srotasa* in the body as per *Sushruta* and *Charak*. Its root source (*Moolsthan*) is *Talu & Kloma*.³ The role of *Udakvaha Srotasa* is to maintain body fluids. When it is interrupted by any internal or external trauma it leads to either *Pipasa* or death.⁴

The root source *Talu* of *Udakvaha Srotasa* is well known and understood as palate everywhere but still there is ambiguity about *Kloma*. A difference of opinion is found in Ayurvedic texts regarding the *Kloma*. Some organs which are usually considered in context of *Kloma* are *Pittashaya*, *Agnayashaya*, *Kanthanadi* and *Phuphusa*. Many authors and research scholars worked on topics related to *Kloma* but ambiguity about *Kloma* is not resolved.

MATERIALS & METHODS:

Ayurveda compendia like *Charak*, *Sushruta*, *Vagbhata* and other relevant text book of *Ayurveda* with their commentaries. Articles from journal and relevant internet sites were available.

Review of Literature:

In *Adhyaya* 19 and *Rucha* 85 of *Yajurveda* while offering the *Varuna-Prarthana* it has been stated that *Ashiwini Kumar* and *Devi Saraswati* formed the *Swaroop* of *Indra*. In that concern, *Hriday* and *Satya* are formed from *Purodashena*. *Yakrit*, *Kloma*, *Vayavya* (which is on both side of *Hriday*) and *Pitta* are formed from *Varuna*.⁵

Kloma is one among 36 parts of creatures which are relinquished in *Yagya* explained in *Yajurveda*.

While explaining the *Yakshma-Nivarna* in *Athravaveda Kanda-9* and *Sukta-8*, it has been stated that "I remove the *Visha* of *Kshya Roga* which causes *Shula* in *Udara*, *Kloma* and which makes the *Nabhi* and *Hriday* as *Dosha Yukta*."⁶

In *Apstamba Shrauta Sutra Yakrita* is said *Kalakhanda* and it is mentioned that *Kloma* is similar in its appearance as *Yakrita* and is *Tila-Mamsa*.⁷

In *Pashubandha Prakarna* of *Varaha Shrauta Sutra* states that while performing animal sacrifice one should pour the clarified butter on the *Kloma* in the increasing manner which is offered to Dieties probably *Varuna*.⁸

In *Pashubandha Prakarna* of *Bhardwaj Shrauta Sutra*, animal sacrifices is being given, it has been said that one who is going to perform an animal sacrifices should subsequently put into the *Pan/vessel* the right buttock (*Dakshina Shroni*), the testis with penis, the *Kloma* and the spleen (*Pleeha*) and pour out clarified butter on them.⁹

In *Charak samhita Antar Vidradhi* of *Kloma* shows:¹⁰ *Pipasa-thirst*, *Mukha Shosha*- dryness of mouth, also For *Udakavaha strotas*, the origin is *Talu* and *Kloma*. The symptoms of its affection are dryness of tongue, palate, lips, throat and *Kloma* and excessive thirst. By observing these symptoms one should know that the *Udakavaha Strotas* is affected.¹¹

Kloma is also described as *Matrij Avaya* and Also explained *Kloma* in *Panchadasha Koshtangas*.¹² *Kashyap* has counted 13 *Koshthangs* In *Ashtang-Hridaya* the *Koshthangas* portrayed are *Hridaya Kloma Phuphusa, Yakrit, Pleeha, Unduker Vrukka, Nabhi, Dimba, Antra* (Intestine)¹³ and *Basti*.¹⁴

According to *Chakrapani*, *Kloma* is seat of *Thirst*. Here, important organ like *Phuphusa* is not mentioned in *Koshthangs*. only. *Yadnyavalkya Smriti* and *Bhela* have said *Avahanan* in place of *Pakwashaya*. In such a condition some people say that in *Charak Samhita Pakwashya* should be read as *Avahanan* and *Avahanan* should be understood as *Phuphusa*. It is here only that, *Gangadharji* has considered *Kloma* as *Phuphusa* and *Unduka*.¹⁵

Also *Kloma* is explained in *Shhdra Hikka Prakarana, Trishna Roga- Karan* and *Samprapti, Jalodar- Karan* and *Samprapti* and

in *Trimarma*.

Sushruta has given the organogenesis based on *Dosha* and *Dhatu*. While expressing about *Hridaya* he has cited the general life systems of it and furthermore investigated the close by *Koshtanga*. *Hridaya* is gotten from embodiment part of *Kapha* and *Shonita* The ten *Nadis* circling *Prana* (fundamental vitality) are related with it. On the lower and left part of *Hridava*, *Pleeha* and *Phupphusa* are found comparably *Yakrita* and *Kloma* are arranged on its right side. This is an exceptional reference of energy.¹⁵

According to Ayurvedic classics it is a site of *Antar vidradhi* and pathology like *Trushna*. The internal abscess formed in body are formed like *Gulma* (bump) and distended like ant colony in *Guda*, opening of bladder, umbilicus, *Kukshi*, inguinal area, kidney, liver, spleen, heart and *Kloma*. If internal abscess is located in *Kloma* it produces extreme thirst.¹⁶

In the structural arrangement of *Sandhi Sushruta* has described eight types. *Mandala Sandhi* is one among these and related for the most part with joints of ligaments. *Mandala sandhi* are available in *Kantha*, *Hridaya*, *Netra* and *Klomanadi*.¹⁷ *Sharangdhar* while portraying *Ashaya* referenced "*Tila*". *Shleshmashaya* (seat of *Kapha*) is in the *Uras* (chest) beneath it is *Aamashaya*. Above and to one side of the *Nabhi* (umbilicus) is in the *Agniyashaya*. It is *Tila* and beneath this is *Pawanashaya*.¹⁸ The idea of *Tila Agniyashaya* made some disarray with respect to *Kloma*.

The commentator *Aadhamalla* clears in such manner that *Tila* is framed from *Shonita-Kitta* and is available on right side close *Yakrita* which is otherwise called *Kloma*.¹⁹ Insufflations of *Samanavayu* in *Rakta* during digestion of *Dehoshma* change *Rakta* into black out shaded (than *Rakta*) organ which is known as *Kloma*.²⁰ *Arundatta* in his commentary portrays organogenesis of *Kloma*.²⁰

DISCUSSION:

Kloma and Vedic period: Basically, the word *Kloma* identified from the era of *Vedic* period. The reference regarding *Yakrita*, *Kloma* and *Pittasthana* found in *Vajasneya Samhita* created by God *Varuna*.⁵ Even in *Charaka Samhita*, in *Sharirsthana* 7th chapter, fifteen *Koshtanga* explained and *Kloma* is one of them.¹⁵ But not a single reference found regarding *Kloma* in *Sushrut Samhita* and *Sushruta Samhita* is the first *Vedik* literature which given the *Phupphusa* one of the organs specified in the *Koshtanga*. However, it is impossible that the a very ancient context *Charaka Samhita* couldn't include the *Phupphusa* in *Koshtanga*.¹² Similarly, in the *Eitareya Bramhana* 36 disunion parts of animal sacrificed and among *Koshtanga 'Kloma'* is mentioned as a part of forfeited. So many references are to be found in the *Vedik* literature since *Atharvaveda*, *Vajasneyi Samhita*, *Shatapatha Brahman*, *KatyayanaKshrouta-sutra*, *Gobhila sutra*, *Bruhadaranyaka* and *Upanishada*. By the way of century's overhangs, the philological diversity changes the meaning of various things, as a result in this scenario *Phupphusa* may be called as *Kloma* in that era.

Kloma as a Koshtanga: According to *Acharya Charaka*, *Vagbhata*, *Kashyapa* and *Bhela*; the *Kloma* is included *Koshtanga* i.e. one of component of *Antaradhi* (Trunk), organ situated in the body cavity. Among all *Acharyas Charak*, *Bhel* and *Kashyapa*, included *Kloma* in the category of *Koshtanga*^{12,20} ²¹ but on the other hand; *Sushruta* included '*Phupphusa*' as a *Koshtanga*.

As a part of surface anatomy, *Shushruta* stated relative position of *Kloma*, that is one of the structures which located below and left of *Hridaya* i.e. *Pleeha*, and to the left of the heart above (*Vamataha* i.e. by the left side of the heart) i.e. *Phupphusa* (left lung).²² Thus, *Sushruta* has not consider right lung as a

Phupphusa. While describing quote '*Hridayasya Dakshinato (Adho) Yakrita, Dakshinato (Upari) Kloma*' means below the heart and right (alike *Pleeha*) i.e. *Yakrita* (liver) and to its right and above *Kloma* is situated. The commentary on *Ashtanga Hridaya* Chapter 12, Verse 3, also supportively given evidence to that *Kloma* is big mass made up of muscular tissue located to the right of the heart.²³

Similarly, in a commentary *Madhukoshon Madhavnidan* by *Shrikanthadatta*, stated the location of *Kloma* as it is in superior aspect of *Vrukka* (kidney), the relative anatomy observed that upper pole of kidney lies at the level of upper border of 12th thoracic vertebra and the lower border of each lung crosses 6th rib in the mid-clavicular line, the eighth rib in the mid-auxiliary line and posteriorly 2 cm lateral to 10th thoracic spine. Above the level of T11 vertebrae there is presence of diaphragm, pleural cavity and lungs. So it can be conclude that *Kloma* might be the organ present in thorax region.²⁴

Kloma & Marma: The damage to the *Udakhava Srotasa* resulted in to *Pipasa* (this might be occurred due to imbalance of water fluid in the body)²⁵ and *Sadyomarana* might be the consequence of thirst which may be chronic feature or associated with serious pathology, complicated diseases with bad prognosis. *Sadyapranhara Marma* also reflects severe dehydration because of shock especially due to severe hemorrhage and fluid loss, when vital organ structure i.e. *Mulsthana* injured causes severe thirst and immediate death despite not included in *Marma*.²⁶ Hence, *Kloma* may be close organ to the *Marma* point, where in *Kaphasthan, Hridaya* is one and only *Sadyapranhara Marma* situated and its nearby region *Phupphusa* is located.

Kloma & Kapha: *Vagbhata* in *Ashtanga Hridaya* has clearly mentioned '*Kloma*' as a *Kaphasthan*.²⁷ The claim of other organs like Pancreas, Gall bladder, Caecum etc. is being automatically stand cancelled as no one has properties like *Kapha*.²³ *Kapha* is reflection of water present in the body that means '*Ken Jalen Phalati*', *Kapha* is nourished by water content. If the composition of the body is concerned these entities representing each other. Water with proper qualities and quantities nourishes *Kapha*. *Kapha* works through '*Ambukarmana*' i.e. water action. This shows that *Kapha* & its entire functions are like water line action. *Kloma* is a one of the members of *Kapha* predominance system; which perceives the loss of water and signals the body for compensation. Water loss or imbalance may relatively damage the *Kloma* and that signal observed at Talu. Since *Kapha* represents the water body in the human, hence *Kloma* can be linked as one of the waters controlling organ which either indicates water loss or water imbalance. Supporting to the water level balancing, around 0.5% water vapors are present in atmosphere and nearby 5% vapors and trace gases are present in expired air of human lungs i.e. water vapors quantity is higher case of expelled air. This indicates that lungs playing important role in maintenance of body fluids at vital stage also.²⁸

CONCLUSION

Various commenter have described *Kloma* by their point of view. *Damodar Sharma Gaud* has considered it as *Agniyashaya* (pancrease). *Pandit Hariprapanna* has quoted it as gall bladder. *P.K. Warior* has told *Kloma* as *Annalika*. But as per our literary research, we can conclude that as *Kloma* is one of the *Kaphasthan*, it should be present in thorax because main site of *Kapha* is given as *Uraha Pradesh* which is considered as Thorax. Main thoracic organ is lung that is *Phupphus*. From this overall review, *Kloma* can be correlated with *Phupphusa* that is lung.

REFERENCES:

- 1] B.G.Ghanekar, editor, *SushrutaSamhita* of *Sushruta*, *Sharirsthana*5/60, ed. 2006, MeharchandLachhmandas Publications, New delhi 110002, P.no.177.
- 2] B.G.Ghanekar, editor, *SushrutaSamhita* of *Sushruta*, *Sharirsthana* 9/11, ed.2006, MeharchandLachhmandas Publications, New delhi 110002, P.no. 238.

- 3] B.C.Ghanekar, editor, SushrutaSamhita of Sushruta, Sharirsthana 9/14, ed.2006, MeharchandLachhmandas Publications, New delhi 110002, P.no.240.
- 4] B.C.Ghanekar, editor, SushrutaSamhita of Sushruta, Sharirsthana 9/14, ed.2006, MeharchandLachhmandas Publications, New delhi 110002, P.no.241.
- 5] Ravi Prakash Arya editor, Yajurveda Samhita English translation of R. H. Griffith, Parimal publication, 3rd edition, 2002, shlo no. 19/85, P.no.295.
- 6] Devi chand, The Athav Veda, Sanskrit text with English translation, Munshiram Manoharlal Publishers PVT. LTD, edition 2007, shloka no. 9/4/8/12, New dellhi 110055, P.no. 414.
- 7] C.G Kashikar, Apastambha Sharauta Sutra, Vaidika Sanshodana Mandala, 2nd edition 2003, Pune, shloka no. 7/7/11-12.
- 8] C.G Kashikar, Varaha Sharauta Sutra, Vaidika Sanshodana Mandala, 2nd edition 2003, Pune, shloka no. 71/6/7/10.
- 9] C.G Kashikar, Bhardwaj Sharauta Sutra, Vaidika Sanshodana Mandala, 2nd edition 2003, Pune, shloka no. 7/19/11.
- 10] Pandit Rajeshwar Datta Shastri, Charak Samhita, Vol 1, edition 2009, Chaukhamba Bharti Acedamy, Varanasi, Shloka no. su. 17/101, P.no. 359.
- 11] Pandit Rajeshwar Datta Shastri, Charak Samhita, Vol 1, edition 2009, Chaukhamba Bharti Acedamy, Varanasi, Shloka no. ni. 5/8, P.no. 710.
- 12] Pandit Rajeshwar Datta Shastri, Charak Samhita, Vol 1, edition 2009, Chaukhamba Bharti Acedamy, Varanasi, Shloka no. sh. 7/10, P.no. 913.
- 13] Deshpande, Amol. (2019). COMPREHENSIVE STUDY OF AANTRA IN BRUHATRAYI AND ITS CORRELATION WITH MODERN SCIENCE. Indian Journal of Applied Research. 9, 45-46.
- 14] Ashtanga Hridaya, Sharirsthana, Chapter 3, Verse - 12, Edited by Ganesh Garde, Reprint ed. Pune; Anmol Publication; 2006. p. 133
- 15] Sushrutasmhita. Sharirsthana, Chapter 4 verse: 30. Edited by B. G. Ghanekar, Reprint ed. New Delhi; Meharchand Laxman Das publication; 2009; p. 117
- 16] Sushrutasmhita, Nidansthana, Chapter 9, section 23, Edited by Anantram Sharma, Reprint ed. Varanasi; Chaukhamba Surbharati distribution, 2013. Vol-2.
- 17] Sushrutasmhita, Sharirsthana, Chapter 5, section - 27, Edited by P.V. Sharma, Reprint ed. Varanasi; Chaukhamba Orientalia; 2005. Vol-1, p. 177
- 18] Sharangdhar Samhita, Poorva Khanda, Section 5, Verse - 8, Edited by Srikantha Murthy, seventh ed., Varanasi; Chaukhamba Orientalia; 2007. p. 21
- 19] Sharangdhar Samhita, Gudharthdeepika Aadhamalla Commentary, Poorva Khanda, Chapter 5, Verse - 8, Edited by PR Shashtri Vidyasagar, 7h ed., Varanasi; Chaukhamba Orientalia; 2008. p. 45
- 20] Ashtanga Hridaya, Sharirsthana, Chapter 3, Section - 12/3, Edited by H.S. Shashtri Paradkar, Reprint ed. Varanasi; Chaukhamba Surbharati; 2002. p. 387
- 21] P. V. Tiwari, Kshyap Samhita text with English translation and commentary, edition 2008, Chaukhamba Vishwabharti prakashan, Varanasi, shloka no. sh. ¼, P.no. 117.
- 22] Bhisagacharya Harishastri Paradkara Vaidya editor, Introduction by P. V. Sharma, Ashtanga Hridayam of Vagbhata with Commentaries of Arundutta, 9th edition 2005, Chaukhamba Orientalia, Varanasi, shloka no. sh. 3/12, P.no. 387.
- 23] Ambikadatta Shastri, Sushrut Samhita Purvardh, Vol 1, edition 2014, Chaukhamba Sanskrit Sansthan, Varanasi, shloka no. sh. 4/30, p.no. 42.
- 24] Bhisagacharya Harishastri Paradkara Vaidya editor, Introduction by P. V. Sharma, Ashtanga Hridayam of Vagbhata with Commentaries of Arundutta, 9th edition 2005, Chaukhamba Orientalia, Varanasi, shloka no. su. 12/3, P.no. 192.
- 25] Shudharshan Shastri, Madhukosh Madhavnidan, Vijayarakshita Kanthdatt, Chaukhamba prakashan, Varanasi, Trishna nidan- 1, P.no. 362.
- 26] Ambikadatta Shastri, Sushrut Samhita Purvardh, Vol 1, edition 2014, Chaukhamba Sanskrit Sansthan, Varanasi, shloka no. sh. 9/12, p.no. 96.
- 27] R. D. S, Charak samhita, vol 2, Chaukhamba bharti Acedamy, edition 2008, Varanasi, shloka no. sid. 9/6, P.no. 1053.
- 28] K Sembulingam, Essential of medical Physiology, 5th edition, J P Brothers Medical Publishers LTD, New Delhi, P.No. 49-51, 57-58.