EVALUATION & INTERPRETATION OF THE CONTROVERSIAL TERM “KLOMA” FROM SHARIR ASPECT

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Abstract - Identification of Kloma, its function, site and relation with Srotas is still a debated issue and no unanimous opinion has been emerged so far. In our Samhitas there are many references about the Kloma. In Samhita the Moolasthana of Udakavha Srotas is mentioned as Talu and Kloma. Kloma is the organ situated on the right lateral side of the Abdomen below the Liver and also called as Tila. Some scholars correlate the Kloma with right Phuppusa or Mediastinum or Kloma nalika or Pancreas. But by justification, it can be correlated with Right Suprarenal gland.

Keywords - Kloma, Udakvaha Srotas, Pipasa, Talu, Right Suprarenal gland.

Introduction - Knowledge of Sharir is mandatory for the student of any system of Medicine. Our Sages have deliberated the detailed description about many organs of the body. But there are some conflict-ridden entities. Kloma is one of such type. Identification of Kloma, its function, site and relation with Srotas is still a debated issue and no unanimous opinion has been emerged so far.

In our Samhitas there are many references about the Kloma.

Acharya Charaka has mentioned fifteen Koshtanga1 (visceral organs) such as:- Nabhi(Navel), Hridya(Heart), Kloma(?), Yakrut(Liver), Pleeha(Spleen), Vrikka(Kidney), Bastii(Urinary bladder), Purishaadhar, Amashaya(Stomach), Pkvashaya, Uttarguda(Rectum), Adharguda(Anal canal), Kshudrantra(Small intestine), Sthulantra(Large intestine), Vapaavahan(Omentum).

While explaining the relation of Kloma with the Udakvaha Srotas our Acharaya mentioned2 In Samhita the Moolasthana of Udakavha Srotas is mentioned as Talu and Kloma. So one should know that if Udakavha Srotas is affected it may cause pipasaa (thirst) and may lead to death also.

The Moolsthana of Udakvaha Srotas3 is Talu and Kloma and if the Udakvaha Srotas is affected then symptoms observed are: dryness of Tongue, Palate, Lips, Throat, Kloma and excessive thirst.

Abhyantara vidradhi4 (Internal abscess) - Abscess in the Liver produces dyspnoea, and that in the Kloma produces profound thirst.

While explaining the site of Kloma it is mentioned in samhita5

Kloma is the organ situated on the right lateral side of the Abdomen below the Liver and also called as Tila.

In other reference it is mentioned that6
Hridaya and Pranvaha dhamani (arteries sustaining respiration and life) attached to it are produced by essence of Shonita and Kapha. Below it (Heart) to the left are situated Pleeha (Spleen) and Phuffusa (left Lung) and to the right are situated Yakrut (Liver) and Kloma.

So by this reference we can understand that Kloma is koshthang and it is situated below the Heart on the right side near the Yakrut.

From the reference of Garbhasharir the Utpatti of Kloma

So this indicates that Kloma is developed from Kitta of Shonit.

**Conceptual analysis and Discussion**

- Some interpret Kloma as Kloma nalika (Trachea). But, there is no reference of inclusion of Kloma nalika (Trachea) in Koshthanga.

  The role of Kloma nalika or Trachea in the mechanism and control of thirst still not proved. Position of Trachea is also not as position of Kloma as stated in the text. In the reference of Udakvaha Srotas dushti Acharaya Charaka mentioned the terms as Jihva, Talu, Oas, Kanth (Neck), Kloma shosha.

- Some scholars correlate the right Phuppusa with Kloma. The relation behind its correlation can be Angiotensin converting Enzyme (ACE).

  When fluid level in the body decreases and blood pressure falls, then Kidney secrete Renin. Renin convert Angiotensinogen into Angiotensin 1 & this is converted into Angiotensin 2 by Angiotensin converting Enzyme. It causes constriction of arterioles in the body so that peripheral resistance increases and blood pressure is rised. It also decrease the GFR (Glomerular filtration rate) so, it result in retension of water and salt. This increases the volume of ECF (Extra cellular fluid) to normal level. Injury to right Phuppusa will disturb this mechanism and lead to thirst.

  But ACE (Angiotensin converting Enzyme) is also secreted from left Lung along with other body tissue like Epithelial cells of the Kidney, Vascular endothelial cells, cells of Adrenal cortex, Testicular Leydig cells and tissue of the brain which also takes part in Renin Angiotensin Aldosterone System. So it is difficult to decide Kloma as right Phuppusa.

- Vd. Vilas Nanal is a proponent of Kloma to be considered as Mediastinum. As, Mediastinum comprises of Heart, Oesophagus, Trachea & great vessels. Moolsthan of Udakvaha srotas is Talu and Kloma.

  We cannot assume Kloma as Mediastinum. The reason being, according to position, Mediastinum is placed between two Lungs above the Liver. Structure of Kloma is resembles like Tila but not any of these organ which is placed in the Mediastinum is resemble like Tila. Functionally also it cannot be correlated with thirst because no one of these organ directly related to thirst.

- Vd. Damodar Sharma Gaud assume Kloma as Pancreas, because structure of Pancreas resemble with multiple aggregation of Tila. Pancreas extend from 2nd part Duodenum (Second Lumber Vertebrae) up to Spleen, & according to 9/18 Dalhan commentary, it lies below the Liver. Viddha lakshana of Udakhvaha srotas result in thirst and death.

  If we think so, that it can be correlated with Kloma due to excessive thirst in the diseases of Pancreas. Then there are also many other organs related diseases which have also found excessive thirst. For example - Alcoholic Liver disease, Diabetes insipidus, Cushing syndrome, Sarcoidosis etc. So it cannot be correlated with Pancreas as per this analysis.

Genesis of Phuffusa from Shonita Phena

By above description it is explained by Arundatta while commenting on Ashtang Hridya that Phupphusa is also present on the right side of the body.

**Conclusion** - It can be concluded that Kloma can be right Suprarenal gland. From the structural point of view, right and left suprarenal gland are different. Right suprarenal gland is pyramidal in shape and its apex related to bare area of Liver. Right suprarenal vein drain directly in to Inferior Vena Cava (IVC). On the left side the gland is semi lunar in shape and apex close to the Spleen. Left suprarenal vein drain into left renal vein.
Acharya Shri Kanthdatt said\(^9\)

Kloma is organ that present above kidney and it is the site of thirst.

Functionally Suprarenal gland by secreting Aldosterone is also responsible for the fluid and electrolyte balance in the body which may be correlated with mechanism of thirst in the body. When Aldosterone fails to secrete, it leads to Addison disease and symptom are excessive thirst, dehydration, weakness, hypotension etc.

So from all above points Kloma can be considered as right Suprarenal gland, which has immense importance in the body and trauma to it may cause severe hormonal changes, that leads to disturbance in homeostasis of the body.

References and Citations

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