



A REVIEW ARTICLE ON THE PHYSIOLOGICAL STUDY OF *SHATKRIYAKALA*

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ABSTRACT: -

The knowledge of *Shat Kriyakala* helps get the knowledge of *Sadhya Asadhyatava* of disease and plans the proper treatment. An ancient Indian surgeon, *Shushrut* has described the concept of *Kriyakala* in *Varnaprashnadhya*, terms *Kriyakala* refers to the recognition of the progression of the stage of a disease's, which helps to determine appropriate measure to correct the imbalance in *Doshas* and *Dhatus* (biological factors). The knowledge of *Shat Kriyakala* helps get the knowledge of *Sadhya Asadhyatava* of disease and plans the proper treatment. The concept of *Kriyakala* provides benefits to plant appropriate treatment according to the stage of disease progression. The appropriate measures can be taken to correct the balances of *Doshas* in particular stages of disease. Ayurveda explored the concept of *Shatkriyakala* as a “six stages of disease progression” in which the pathogenesis of disease can be assessed in different stages. Expression of any disease is a chain of various processes starting from the encounter of etiological factors unto formation of that disease. In *Ayurveda* it is stated that *Sharir Doshas* i.e., *Vata*, *Pitta* and *Kapha* are accountable for all kind of functions in the body. At the same time if there is imbalance in these *Doshas* due to any reason, they can affect *Dhatus* (body tissues) and can cause various diseases. The causation of disease is attributed to *Doshas* hence it is essential to know the movement of these *Doshas* in our body at any given point of time. Expression of any disease is a chain of various processes starting from the encounter of etiological factors unto formation of that disease. In *Ayurveda* it is stated that *Sharir Doshas* i.e., *Vata*, *Pitta* and *Kapha* are accountable for all kind of functions in the body. At the same time if there is imbalance in these *Doshas* due to any reason, they can affect

Dhatu (body tissues) and can cause various diseases. The causation of disease is attributed to *Doshas* hence it is essential to know the movement of these *Doshas* in our body at any given point of time. *Ayurveda* is a science of life. It is a system of traditional medicine native to Indian subcontinent but now days its knowledge is accepted worldwide. *Ayurveda* is a science of life. It is a system of traditional medicine native to Indian subcontinent but now days its knowledge is accepted worldwide.

KEYWORDS: - *Kriyakala*, Pathogenesis, Diagnosis, *Prakopa*, *Sanchaya*, *Ayurveda*

INTRODUCTION: -

Shatkriyakala are the six stages of the disease manifestation process. In which the *Tridoshas* mould themselves in various stages with appearance of respective features. *Shatkriyakala* is the six stages of the line of management to be adopted according to the six progressive stages of the diseases though its complete manifestation. It has importance in early recognition of the stage of the process of disease, the resort to the appropriate measures to correct the same. The modernization and sedentary lifestyle of human beings in developing countries have created several disharmonies in the biological system leading to various disorders, which primarily hamper the locomotor system. *Shat Kriyakala* is a diagnostic tool to know the stage of disease formation where *Kriya* means the chance of treatment used to improve the disturbance in *Dosha*, and *Kala* refers to the stage of progress of a disease. In today's era enormous new diseases are come into across globally due today's sedentary lifestyle, pollution, eating behavior (pattern, habit), many more cause. The inability of man to achieve and maintain his internal steady-state equilibrium initiate the process of disease. According to present scenario, now it is high time to focus on the prevention of diseases in society with the application of gold standard Ayurvedic wisdom. The six stages of *Shatkriyakala* are mentioned by *Shushruta Sanchya*, *Prakoap*, *Prasar*, *Sthansansraya*, *Vyakata* and *Bedhaavstha* and the physician who knows these six stages perfectly and use them properly for the treatment is known as physician in *Ayurveda*. These six are also the stages of *Chikitsa*. If *Vyadhi* is treated in the first stage, it won't convert into the next stage. If accumulated *Doshas* have been eliminated they won't manifest successive stages of *Kriyakala*. If not eliminated, it passes to the next stages. As the disease advances to a later stage, it becomes stronger and more difficult to manage. The imbalance of *Doshas* can be corrected as per the *Kala* or severity of disease thus patient get early relief disease cured completely. It is one of the most important *Ayurvedic* principles explaining not only the stages of disease manifestation but also treatment approach in detail. These *Shatkriyakala* (six stages) are as follows. 01. *Sanchaya* (Stage of accumulation) - Gradual accumulation of *Doshas* in their respective seats. 02. *Prakopa* (Stage of inclination) - Accumulated *Doshas* moving upward in their location. 03. *Prasara* (Stage of immigration) - Aggravated *Doshas* leave their original place and spread to the other parts of the body through different *Strotasas*. 04. *Sthana Samshraya* (Stage of localisation) - Vitiated *Doshas* move to different places and get localised somewhere because of *Kha Vaigunya* i.e., obstruction in their path. 05. *Vyakti* (Stage of expression) - Appearance of symptoms of any specific disease is called as *Vyakti*. 06. *Bheda* (Stage of

complication) - This is the stage of manifestation of specific signs and symptoms of that particular disease. According to *Ayurveda* vitiated *dosha* affects the other body elements & union of these results in the formation of disease. This knowledge of *Kriyakalas* is most essential to fulfill the principle of *Acharya Charakacharya* i.e., to know the *Avastha* of *Vyadhi* (stage of disease).[1] Apart from this the *Kriyakalas* gives us the knowledge of diagnosis, prognosis and the level of intervention and so that to prevent the establishment of a disease.

MATERIALS AND METHODS: -

1) *SANCHAYAAWASTHA* (STAGE OF ACCUMULATION): -

First stage of *shtakriyakala* is *sanchaya*. Word *Sanchaya* means collection or putting together. *Sanchaya Awastha* is an incentive stage of *Kriyakala* where accumulations of *Doshas* due to various *Nidana* Sewan take place. In this stage *virukta doshas* start accumulating in their own site. Gradual accumulation of *Dosha* in respective seats. This stage represents the inceptive phase of the disease when the *doshas* is started to have accumulated and stagnated in its own place, instead of freely circulating as in its normal *awastha*. Etiopathogenesis of any disease which is called *Samprapti* in *Ayurveda* gets started in this stage. It is of two types-

a) *Swabhavik*- As *Doshas* accumulate due to its own reasons developing in the body. It is subdivided into two.

i) *Awasthik*- As *Doshas* accumulate in the body as per the *Awastha* or age of the person as *vata* is accumulated in old age, *Pitta* is accumulated in adolescence and *Kaphain* childhood.

ii) *Namithik*- *Dhosha* accumulated in the body according to the *Ritus* or seasons- As *Vata* in summer season, *Pitta* in rainy season, *Kapha* in winter season.

b) *Aswsabhavik*- The *Doshas* accumulate in the body due to *Mithya ahara-Vihar* (overeating, indigestion, junk food) and *Pragyapradha*.

Only quantity of *Dosha* is increasing in this stage and produce mild symptom, which is like and dislike for certain foods, activities, etc; desire for those which possess qualities, opposite to those of the increased *Dosha* (*Viprita Gunaichchha*) and dislike for those which caused the increase of the *Dosha* (*ChayaKarana Vidwesa*). It is also known as *Samhata Rupa Vriddhi* (without mobility). Due to insufficient *Nidan* (causative factor) *Dosha* increase but remain in an immobile state in their place.

Clinical Manifestations: -

- i *Vata Sanchaya Lakshana - Stabdhapoorna-koshtata* (Stiffness and fullness in abdomen)
- ii *Pitta Sanchaya Lakshana – Pitavabhasata Mando ushamta* (yellowish discolouration of skin, Slight rise in bod temperature)
- iii *Kapha Sanchaya Lakshana - Anganam gauravta Alasyam* (heaviness of body and laziness)

Based on the common & specific symptoms this state will diagnose. For ex: common symptoms develop such as, aversion to similar (Quality), (Taste) etc in. [4] Ex: An intake of sweets when gets the person will have aversion to sweets & to consume further. Sometimes develops desire to opposite *Shitadi* (Cold) *Gunas* increased due to *Vata Chaya* interest to have hot milk or tea or hot food items.

2) PRAKOPAAWASTHA (STAGE OF PROVOCATION): -

In this stage, accumulation processes step in further stage. If no treatment or action is taken in *Sanchaya Awastha*, then *Dosha* further accumulates owing to constant *Nidan* Sevan and comes into the next stage which is *Prakopa Awastha*. In this stage, the previously accumulated *Dosha* get more aggravated but at that time they remain within their sites. Accumulated *Doshas* moving to other sites other than its main site. According to *Acharya Vagbhata*, *Prakopa* is *Unmargagamita* which means *Dosha* starts upward movement in their place. In this stage *Dosha* is in form of *Villayana Rupa* means it is in liquid form. The accumulated *Doshas* get reaseons due to involvement in *Doshas* specific *Nidan*(etiological factors). This stage nourishes the accumulated *Doshas* till it tends to morbid stage for spreading throughout the body.

Acharya Chakrapani and *Hemadri* have described two types of *Prakopa (Vridhhi)* in their own words. Both of these can be summarized as follows-

a. *Chayapurvaka prakopa (with accumulation):* with successive accumulation, stage by stage or insidious increase i.e., *Dosha prakopa* will take place with prior *sanchaya avastha*.

b. *Achayapurvaka prakopa (without accumulation):* without **successive** accumulation or quickly i.e., *Dosha prakopa* will take place without prior *sanchaya*.

Clinical manifestations: -

- i *Vata Prakopa Lakshana: - Koshta Toda Sancharana* (Pain and movement of *Vata* in *Mahastrotasa*).
- ii *Pitta Prakopa Lakshana: - Amlika* (Sour eructation), *Paridaha* (burning sensation all over the body), *Pipasa* (excessive thirst).
- iii *Kapha Prakopa Lakshana: - Annadweshha* (Dislike of food), *Hrudayotkleda* (excessive salivation).

3) PRASARAAWASTHA (STAGE OF PROPAGATION): -

This the third stage of *Shatkriyakala*. The term *Prasar* means spread. *Doshas* vitiated by their concern causes will leave their original places and spread to the other parts of the body. Aggravated *Dosha* leaves its original place and spread to other parts of the body through different *Srotas*. At this stage all vitiated *Dosha* aggravate more and more and leave their chief place then enter into *Rasraktadi Paribharaman* and spread via three types of *Gati* in the body through *Tiryaka Shira*. As *Acharaya Shushrut* has illustrated it by an example of soaking of starch products for a overnight which ferments and rises up acquiring new and unseen qualities.

PrasarAwastha is of 15 types as *Vata, pitta, Kapha, Rakhta, Vatapitta, Vatakapha, Kaphapitta, Pittarakht, Ppittakapha, Kaphavata, Vatarakht, Pittarakht, Kapharakht, Vatapittakapha, Vatapittakapharakht*.

This stage is also collated with *Nidan* (etiological factors) which aggravate the doshas and make them flow in the body and produce diseases. The continuous indulgence in *Nidana* i.e.; improper *Ahara* and *Vihara* may lead *Prakopa avastha*.

All *Dhatus, Malas, Pitta* and *Kapha Dosha* are *Pangu* (inactive) i.e., they may increase in quantities but does not have the capacity to move from one place to another. For movement they need to get stimulated and transported to different places by *Vata Dosha* only.

Clinical manifestations: -

- i Vata Prasara Lakshana: Vimarga-Gamana (Regurgitation), Atopa (flatulence).
- ii Pitta Prasara Lakshana: Osha (sense of boiling), Chosha (squeezing sense), Paridaha (burning sensation), Dhoomayanani (Emitting smoke from mouth).
- iii Kapha Prasara Lakshana: Arochaka (anorexia), Avipaka (dyspepsia), Angasada (lassitude) and Chardi (vomiting).

4) SATHANSANSRAYAAWASTHA (STAGE OF LOCALIZATION):-

In this stage the prorogated *Doshas* circulated throughout the body in association with *Vata Doshas*. Agitated *Doshas* spreads to different places and struck somewhere because of obstruction in *Srotas* due to abnormality in *Srotas* is called *Sthanasamshraya*. The abnormality in *Srotas* causes obstruction of the *Doshas*, the vitiated *Doshas* can vitiate organ and produces a disease of that particular organs in which morbid *Dosha* gets accumulated. The vitiated *Doshas* gets their place where they find free space i.e., *Khavaigunya*. In *Prasara Awastha, Prakupit* (vitiating) *Dosha* who spreads outside from their native place, gets obstructed at that part of the body where *Khavaigunyua* exists and gets localized there in this stage. This process of localization of *Dosha* is known as *Sthanasamshraya*. It is a phase where the disease is yet to be manifested. *Dosha* gets obstructed in the *Srotas* due to *Khavaigunyua* leading to *Doshas-Dushya-Sammurchana*. In this stage of *Kriyakala* the

complete representation of a disease will not appear evidently because this is the budding stage of that disease. As a result of these *Poorvaroopa* (Prodromal Symptoms), the disease appears. Here the symptoms are weak, and this stage is also called *Poorvaroopaawastha*. This is the place from where the real pathological process begins which triggers the local as well as systemic factors like change at the level of biochemistry. This stage is actual condition of generation of a disease.

Clinical Manifestations: -

The type of disease depends on where the accumulated. Diseases occur depending on the type of involved channels various such as renal stone, diarrhoea, fever. To prevent the progress of disease in this stage rejuvenation treatment is very beneficial. As *vata Doshas* get accumulated in abdomen they produce diseases like indigestion, diarrhea, and fibroid. If accumulated in upper portion of the body produces diseases of nose, eyes, ear and mouth. If accumulated in foot causes diseases like gout etc.

5) VYAKTA AVASTHA (STAGE OF MANIFESTATION): -

if there is no proper treatment taken during four stages of *Kriyakala* diseases undergoes further changes and then the abnormalities get aggravated further and assume the severe form known as *Vyadhi*, manifestations clearly with all its characteristics features hence this stage called as stage of manifestation. According to *Dalhana* this stage is a stage of manifestation of disease. In this stage, Cardinal signs and symptoms are well produced, and one can easily identify the disease. [28] Before this stage, we say that *Dosha* is in *Tridoshaja* condition but in *Vyaktawastha* they specifically show their presence. Appearance of clear-cut symptoms of the disease. The main symptoms can be seen in this stage thus treatment can be planned accordingly. The *Vyadhi Pratyanka Chikitsa* may be adopted in this stage to prevent further progression of disease. The main symptoms can be seen in this stage thus treatment can be planned accordingly. The *Vyadhi Pratyanka Chikitsa* may be adopted in this stage to prevent further progression of disease. In this stage the *Doshaand Dushya* get together and form disease and the actual sign and symptoms are produced.

The signs and symptoms appearing in this *Vyakti* stage are broadly classified into two kinds: -

- a. ***Samanya Lakshanas***: general signs and symptoms produced by the increased *Dosha* which may be seen in all disease commonly.
- b. ***Pratyatma Lakshanas***: specific or peculiar signs and symptoms which are seen in any one disease characteristically.

6. BHEDHAAWASTHA (STAGE OF CHRONICITY): -

Bhedha is final stage of disease progression in which complications of disease may observe and origin of other diseases may take places. In this stage specific sign and symptoms of the disease's manifests. In this stage the process of pathogenesis completes and a patient develops the individual disease. In this stage of differentiation of the type of disease. If appropriate action was taken in *Vyaktaawastha* then *Dosha* vitiation will be suppressed, and the disease does not progress to the next stage which is *Bhedawastha* and *Updravaawastha*. Untreated disease attains chronicity and develops *Updrava* (complications). In this stage, diseases became *Chirakari* (chronic) or *Asadhya* (incurable). [33] Chronicity depends upon several factors like the intensity of *Nidana*, *Purvarupa*, or *Rupa*, the extent of vitiation of *Dosha*, *Dhatu* involvement, *Prakriti* of patients, etc.

In *Ayurveda* executing therapeutic measures to treat a disease has given second place whereas prevention of the disease has given first priority. Various therapies described in *Ayurveda* especially *Panchakarma* and *Rutu Shodhana* are founded for restoration of functional balance (homeostasis). *Rasayana* concept of *Ayurveda* explains nourishment of *Dhatu*s (tissue regeneration).

DISCUSSION: -

The concept of *ShatKriyakala* is of most importance from public health intervention point of view and more especially from the perspective of disease control. *Kriyakala* gives an opportunity at each stage to halt the disease process by appropriate measure(s). *Kriyakala* is similar to what has been described as disease cycle or natural history of disease in modern medicine. In the manifestation of disease, it is necessary to rely upon the *Shatakriyakala*. If we are able to understand the *Shatakriyakala* properly the pathology can be judged at its initial stage only and it can be treated easily. Thus, the proper knowledge of *Shatakriyakala* helps in understanding the process of manifestation of various diseases. Also the knowledge of *Shatakriyakala* is helpful for getting the knowledge of *Sadhyasadyatva* of disease. The stage of *Sanchaya* and *Prakopa* can be comparable with that of the stage of susceptibility. The stage of susceptibility is also called as stage of "Pre-pathogenesis" by some authorities. In this stage, the risk factors and the host should interact with each other in a suitable and favorable environment for the disease to occur. At the *Prasara* and *Sthanasanshraya avastha*, the vitiated or aggravated *Dosha* start moving and get settled at a particular organ or organ system. At this stage, the disease is neither clearly evident nor completely buried. Hence, the diagnosis of a disease becomes difficult at this stage. The modern tools and techniques cannot identify the disease at this stage. This stage is comparable with that of presymptomatic disease where the disease process has already begun, but the overt signs and symptoms are not evident. The fifth stage of *ShatKriyakala* is *Vyakti* where the disease is clinically manifested. This is comparable with the stage of clinical disease in natural history of disease. As this stage is marked with clinical signs and symptoms, the modes of intervention at this stage would be early diagnosis and treatment. The last stage of *ShatKriyakala* is *Bheda*, which can be compared with the stage of diminished capacity. This stage may end up with recovery, disability, or death. Importance of *Shatakriyakala* -This concept helps to assess

progress of disease, Helps to prevent further accumulation of *Hetu*, This concept provides information about disease causing factors thus prevent measures can be adopted, *Shatkriyakala* assures accurate management of disease and helps to plan suitable treatment regimen, The information about *Sthanasamshraya* may help to prevent healthy organ to get affected by disease, The *Sadhyasadhyatva* of disease can be explored based on the stage of *Shatkriyakala* (progressive stage of disease), The concept of *Shatkriyakala* helps to assist complete pathogenesis of disease.

CONCLUSION: -

The knowledge about disease progression helps to plan preventive and therapeutic measures. According to the specific disease manifestation and progression the appropriate guidelines of *Dinacharya* and *Ritucharya* can be adopted to further prevent disease progression. The six stages of disease progression described as *Shatkriyakala* in *Ayurveda* and this concept helps greatly towards the prevention and management of diseases. *Kriyakala* as *Chikitsavasara* referred to the time of treatment during the disease manifestation. *Shatkriyakala* helps to assess patho-physiology of disease and physician can diagnose at any stage and plan accordingly. The disease prevention in early stage prevents further progression of the disease. *Shatkriyakala* is helpful in the prediction of *Sadhyaasadhyatva* of disease and provides ways to completely eradicate morbid *Doshas* and their manifestation. The *Ayurveda* concept of *Shatkriyakala* works towards the early prevention and treatment of disease. Now it is high time to focus on the prevention of diseases in society with the application of gold standard *Ayurvedic* wisdom. In *Ayurveda* progression of any disease is explained in six stages of *Shatkriyakala*. *Dosha* is considered as the biological entities of the body on which health or illness of an individual depends. In present scenario food habits, food contents and life style of society has drastically changed and day by day still changing very rapidly. Unwholesome diet or improper life style causes disturbance in the normalcy of the *Doshas* first and then pathogenesis starts involving the *Dhatu*. The knowledge of *Shatakriyakala* is helpful for knowing the *Sadhyaasadhyatva* of disease and also plays an important role in the treatment. *ShatKriyakala* delineated in classical treatises of *Ayurveda* are of great significance.

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