



# CORRELATION BETWEEN *RAKTAVRITA VATA* AND CELLULITIS :- A CLINICAL STUDY

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## Abstract-

Ayurveda considers *Tridosha* are one of the pillars of the body. Among these three *doshas*, *Vata* has immense significance. It plays key role behind maintenance of body in normal and healthy state. Concept of *Avarana* is one of the fundamental and unique concept which helps in explaining *samprapti* of a disease. The *Avarana* on *vata Dosh* by *Rakta dhatu* is known as *Raktavrita vata*. The clinical features show *karma hani* of *vata* and *karmavrudhi* of *rakta*. After review of literature regarding *Avrita Vata*, it is found that the clinical features of Cellulitis are remarkably similar to *Raktavrita Vata*. Hence, both the diseases can be correlated. An observational and analytical study was carried out on 30 diagnosed Patients of Cellulitis. Patients were selected by purposive method irrespective of gender, caste and socio-economic status. The theoretical concept of *Avarana* particularly *Raktavrita Vata* was studied clinically by studying patients of Cellulitis. Clinically five out of eight symptoms of cellulitis were found in about 62.66% of patients registered in the study and *Rakta dushti hetus* are predominantly observed than *Vata prakopa hetus*.

**Key words-** *Avaran*, Cellulitis, *Raktavrita vata*.

## Introduction-

Ayurveda considers *Tridosha* as the pillar of the body. All the functions of the body are controlled by these three fundamental factors <sup>(1)</sup>. The body is sustained and is free from disorders when these are in equilibrium, located in their places and perform their normal functions. If they get deranged they afflict the body with disorders <sup>(2)</sup>. Any disturbance to their equipoise state leads to diseases. Among these three *doshas*, *vata* is very significant. It plays a key role in maintenance of body in normal healthy state <sup>(3)</sup>. *Vata* is strongest of all the *doshas* and is responsible for causing a large number of diseases. It is also quick enough to cause emergency conditions.

The *Avarana sankalpana* is one of the fundamental concepts of Ayurveda. The *avarana* of *vata* can be caused by the *dosha*, *dhatu*, *mala*, *anna* and *ama*. In *avarana* there are two major factors i.e. *avaraka* and *avrita*.

Concept of *avarana* is one of the unique methods of explaining *samprapti* of a disease. However, it is not very popular and not routinely followed for *vyadhi-nidan* and *vyadhi-chikitsa*. Clinical study of one of the *avarana* was thought to be essential for better insight of concept of *avarana*.

*Avarana* of *vata* is difficult to understand as well as to diagnose. Its wrong diagnosis leads to faulty management which further exacerbate the condition. Its understanding is essential for the accurate diagnosis and management.

It is also helpful in understanding the pathogenesis of some complicated diseases in this modern era. *Avarana* is an atypical presentation; hence in depth analysis must be done for a proper diagnosis for a comprehensive management.

The *avarana* on *vata dosha* by *rakta dhatu* is known as *raktavrita vata*. In this condition the *gati* of *vata* is disturbed due to etiological factors other than its own i.e. not due to direct *vata* vitiation factors. *Avaraka* suppresses the normal functions of *avarita*. The clinical features show *karma hani* of *vata* and *karmavrudhi* of *rakta*. This gives rise to features like *daha*, *arti*, *twak-mansataryo*, *raga*, *shwayathu* and *mandala* in *Raktavrita vata* <sup>(4)</sup>. Due to lack of observation and clinical scale it can be mistaken many times. So, for better insight, concept of *Avarana* is studied with the help of particular *avarana* i.e. *raktavrita vata*.

Cellulitis is a non-suppurative inflammatory disease. It can be spread along the subcutaneous tissue, connective tissue plane and across intercellular space. Cellulitis is an entity having systemic and external origin. It cannot be treated properly and can lead to severe complications like Necrotizing fasciitis, Sepsis and Shock <sup>(5)</sup>.

Cellulitis is difficult to compare with any other diseases mentioned in Ayurvedic texts.

As clinical features of *raktavrita vata* are seem similar to cellulitis

Theoretically, it is observed clinically. The study was helpful in understanding *Avaran sankalpna* not only by theoretically but also practically by observation and clinical scale. The study was helpful in understanding the etio-pathogenesis of cellulitis in terms of *avarana*. Here; clinical features of cellulitis are found to be very much similar to clinical features of *raktavrita vata*.

### **Aim and objectives-**

To observe and analyse correlation between *lakshanas* of *Raktavrita Vata* and Cellulitis

### **Material and method-**

For conceptual study literature regarding the *Avrita vata* was reviewed from Ayurvedic classics. Modern review of cellulitis was taken from modern text books also Internet data and various research papers were reviewed.

For Clinical study patients were assessed according to the case record form (C.R.F). Valid and written informed consent of each patient was taken prior to case taking.

### **Type of study-**

- 1) Observational
- 2) Analytical

### **Sample size calculation-**

In attached hospital, prevalence of Cellulitis is 1.9 %. Including error (0.05-0.10%) According to that sample size is 30.

**Sampling Method-** Purposive method

### **Method-**

1. 30 patients of Cellulitis were studied.
2. Written consent of the patients was taken.
3. Detailed case history of patients was taken and required clinical examination was done with help of specially prepared Case Performa.

### **Selection of patients-**

#### **Inclusion criteria**

1. Age group between 18 years to 80 years.
2. Gender – Both male and female patients were selected Irrespective of caste, occupation and their socio-economic status
3. Clinically diagnosed patients of Cellulitis.

#### **Exclusion criteria**

1. Pregnant women.
2. Patients with diseases like immune compromised disease, Koch's disease.
3. Patients having Erysipelas and Herpes Zoster.

Tabel no. 1 :-criteria for assessment

<i>Lakshanas of Raktavrita Vata</i>	Clinical features of Cellulitis
1) <i>Daha</i>	1) Erythema
2) <i>Arti</i>	2) Localized Heat
3) <i>Raga</i>	3) Pain
4) <i>Shwayathu</i>	4) Swelling
5) <i>Mandala</i>	5) Fever
	6) Blisters
	7) Discharge
	8) Itching

**Plan of work:**

30 diagnosed Patients of Cellulitis were selected by purposive sampling method irrespective of gender, caste and socio-economic status.

Valid and written informed consent of each patient was taken prior to case taking. Detailed case history of patient was taken. Patient was assessed for Cellulitis according to the case record forma (C.R.F).

Symptoms of *Raktavrita Vata* and Cellulitis were studied. Discussion and observations were done according to data obtained. Statistical analysis was done. Results were noted. Conclusion was drawn.

**Observation and result-**

Following observations are noted after case taking of 30 patients.

**Age-** It was observed from the present study that the prevalence of *Raktavrita. Vata* is very common in the age group of 50 – 60 years (36.7%) meaning the *uttara avastha* of age. In this age group *vata* gets vitiated very easily and there is depletion of other *dhatu* as well. Hence there is an occurrence of pathogenesis of *raktavrita vata*. In this age group the immunity also gets diminished and hence can cause the disease very usually.

**Gender-** From the present study it was observed that male patients (53.3%) were more in number than female patients (46.7%). The causative factors like stress, physical exertion, day and night duty are common in males than females, causing vitiation of *rakta dhatu* and spicy food intake, night duty causes vitiation of *vata dosha*.

**Socio-economic status-** Observations in the study show that the prevalence of the disease is common in Middle class (56.7%) and Lower class (40%) population. This is because of dietary habits that they follow and unhygienic practices that result in the growth micro-organisms like *S. aureus*.

**Prakruti-** In this study *Vata-Pitta prakriti* (26.7%), *Pitta Kapha prakriti* (20%) patients are observed. This shows that people having *Vata-Pitta prakriti* are more prone to the disease. It may be because *Vata* gets vitiated easily in this *prakruti* and *Rakta* also gets vitiated easily due to *Pittakara ahara*. This is due to the fact that *Rakta* is *ashrita dhatu* of *pitta dosha* and hence causing the pathogenesis easier.

**Site involvement-** From the present study it can be seen that the disease is very common in lower extremities. The observations show that, *Raktavrita vata* is seen more in left leg (36.7%) followed by right leg (26.7%) and right hand (13.3%). It is so because blood has to flow against gravitational force from lower limbs to heart and that can cause stagnation of blood in blood vessels causing blood vessels tortuous and hence causing the disease at that site very commonly.

**Rutu-** From observations in study, the prevalence is more in *varsha rutu* (56.7%) followed by *grishma* and *vasant rutu* (16.7%). *Rutu* has a major impact on human health mentioned in Ayurveda as, in *varsha rutu*, there is *vata prakopa kala*, causing vitiation of *vata dosha*. It is followed by *sharada rutu*, in which *rakta dushti* can occur very easily.

These theoretical principles are reflected in observations.

**Comparison of Rakta and Vata dushti hetus-**

The observation shows 80% incidence of *Rakta dushti hetus* and 53% incidence of *vata prakopaka hetus* in patients. *rakta dushti hetus* are more commonly observed than *vata prakopak hetus*. This comparison helps in proving that *rakta dushti* is greater than *vata dushti* in *raktavrita vata*. More vitiation of *rakta* leads to obstruction in the *gati* of *Vata* by developing a covering around *Vata*.

### Comparison of clinical features-

In this study, Clinical features of Cellulitis were observed as follows.

About 100% of patients were having clinical feature of Swelling, Pain, and Erythema. 93% of patients were having clinical feature Local temperature. 70% of patients were having clinical feature Blister. 6.7% of patients were having clinical feature Fever and Discharge. 3.3% of patients were having clinical feature of Itching.

Clinical features of *Raktavrita vata* shows that, about 100% of patients were having clinical feature of *shwayathu*, *arti* and *raga*. 93% of patients were having clinical feature *daha*. 70% of patients were having clinical feature *mandala*.

Out of Eight clinical features of Cellulitis; five clinical features of *raktavrita vata* were correlated (62.66%). These *lakshanas* can be compared with each other and hence there are similarities in clinical features of Cellulitis and *raktavrita vata*.

Table No.2 :- Clinical features of Cellulitis and Raktavrita vata

Clinical features of Cellulitis	Observed clinical features of Raktavrita Vata
Localized heat	<i>Sthanika Daha</i>
Pain	<i>Arti (vedana)</i>
Erythema	<i>Raga</i>
Swelling	<i>Shwayathu</i>
Blister	<i>Mandala</i>
Fever	-
Discharge	-
Itching	-

Table .No.3 Vyadhi ghatak-

Vyadhi-ghatak	Factors responsible for Pathophysiology of Cellulitis	Observed Vyadhi-ghataka
<i>Dosha</i>	-	<i>Raktadosha-pradhan Vata (Vyana vayu)</i>
<i>Dushya</i>	Blood	<i>Rakta, Rasa</i>
<i>Sroto-vaigunya</i>		<i>Predominate Raktavaha with Rasavaha</i>
<i>Dushtiprakara</i>		<i>Vimarga-gaman</i>
<i>Udbhavasthana</i>		<i>Twak-mamsatarayaho</i>

### Discussion

In Ayurveda, *Vata* is one of the significant causative factors in any disease. Different types of *Vata prakopa vikaras* are mentioned under different concepts. *Vata prakopa vikara* due to vitiation of only *vata* is known as “*Nanatmaja vikara*”. *Vata prakopa vikara* due to vitiation of *vata dosha* along with vitiation of *pitta* and *kapha dosha* is called as “*Anubandh vikara*”. *Vata prakopa vikara* due to vitiation of *dhatu* is termed as “*Gata vata*”. *Avarana* formed due to covering of *dosha*, *dushya*, *ama*, *mala* and *anna* to the *vata* is known as *avrita vata*. *Avarana* is one of the basic clinical concepts which go unidentified or mistaken due to lack of clinical scale and observation. All above pathological conditions are produced in different *strotas* and give rise to different diseases.

Due to globalization and modern life style, excessive work load, physical and mental stress and different dietary habits dominate our lives. Sedentary and stressful life gives rise to different psycho-somatic disorders. Cellulitis is one of the non-suppurative inflammatory diseases. Cellulitis is an entity having systemic and external origin. It is mainly streptococcal infection. It is caused by different predisposing factor such as dietary habits and skin wounds. The complications of Cellulitis include Necrotizing Fasciitis, Sepsis and Shock. All above causative factors are due to today’s modern life style.

The observations show that, clinical features of Cellulitis are correlated with clinical features of *Raktavrita Vata*. *Raktavrita Vata* can be correlated with Cellulitis because, in both conditions there is pain at site, erythema, swelling, local temperature, and blisters. 5 out of 8 symptoms of cellulitis were found in about 62.66% of patients registered in the study.

The *hetus* of *rakta dushti* are predominantly the etiological factors of *Raktavrita vata*. In this study *Rakta dushti hetus* (35%) are major etiological factors observed clinically in *Raktavrita vata*.

As per observation, all clinical features developed due to vitiated *doshas* lodge in-between *twak* and *mamsa*. The vitiation of *Rakta dosha* observed more than *vata dosha*. So, *sthanika vyana vayu* get obstructed by *rakta*. *Rakta* creates *avarana* around *sthanika vyana vayu*. The *Karma hani* of *gati* of *sthanika vyana vayu* was due to decrease in *chala guna* which develops Pain. *Karma vrudhi* of *sthanika sukshma guna* of *vyana vayu* leads to its vitiation at minuet level i.e. at *Twak* level. *Karma vrudhi* of *sthanika rakta* by *snighdhatwa* and *dravatwa guna* leads to clinical features like *daha*, *raga* and *mandala* at *twak sthana*. *Karma vrudhi* of *sthanika rakta* along with *karma hani* of *Chala guna* of *sthanika vyana vayu* tends to *Srotorodh* and develop *Shwayathu*. According to Sushruta, the *Raktavrita vata* is preceding stage of *mamsavrita vata*. This shows the involvement of succeeding *dhatu* i.e. *mamsa dhatu* in *Avarana*. Involvement of *uttarotar dhatu* shows *gambhir* or *asadhya* stage of *Avarana*.

Above observations helps in understanding *Avarana* and *Raktavrita vata sankalpana*.

Ayurveda plays an important role in diagnosis and treatment of the disease which identifies the root cause of the disease. At diagnostic level it goes through concept of *hetus*, *dosha*, *dushya*, *srotas* involvement and *roga-marga*. *Avarana* has its own unique feature of diagnosis of disease.

This article puts light on the correlation between clinical features of Cellulitis and *Raktavrita vata*. This study analyses the *hetus*, *srotas* and diagnosis of Cellulitis according to principles of *Avrita vata*.

After review of literature regarding *Avrita vata* it is found that the clinical features of Cellulitis are similar to *Raktavrita Vata*, hence both the diseases can be correlated. A new line of treatment for cellulitis can be drawn according to the treatment principles of *raktavrita vata* as mentioned in the *Samhitas*.

### Conclusion-

- Cellulites can be compared with *raktavrita vata*.
- On observation, *rakta dhatu* is the main vitiating factor along with the vitiation of the *vata dosha*.
- Observation highlights that major etiological factors responsible for *raktavrita vata* are the *rakta prakopaka ahar*, *vihar* and *manasik hetu*.
- *Raktavaha strotas dushti hetus* are to be dominating during the study. They may be etiological factors of *raktavrita vata*.
- Majority of the clinical features of *raktavrita vata* are correlated with the clinical features of cellulitis.
- Above study helps in observation of *karma vrudhi* of *rakta* and *karma hani* of *vata* in producing clinical features of *raktavrita vata*.
- All above observations are helpful in understanding *Avarana* and *Raktavrita vata sankalpana*.
- This study helps in diagnosis of cellulites with the help of basic Ayurvedic concepts and fundamental principles.

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