



Research Article

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ASSESSMENT OF VARNA AND SPARSHA-RELATED ARISTA LAKSHANA IN CRITICALLY ILL PARTICIPANTS

Divyarani¹, HM Ismail², D'Souza Zenica^{3*}

¹ Associate Professor, Department of Samhita Siddhanta and Sanskrit, Yenepoya Ayurveda Medical College and Hospital, Yenepoya (Deemed to be University), Mangaluru, Karnataka, India

² Professor and I/C, Dept of Critical Care Medicine, Yenepoya Medical College Hospital, Yenepoya (Deemed to be University) Deralakatte, Mangalore, Karnataka, India

³ Professor and Head, Dept. of Kayachikitsa, Yenepoya Ayurveda Medical College and Hospital Naringana, Yenepoya (Deemed to be University), Mangaluru, Karnataka, India

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*Corresponding author

E-mail: zenicadsouza@yenepoya.edu.in

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ABSTRACT

This study aimed to explore and assess varna (colour) and sparsha (touch) related arista lakshana (imminent signs of death) in critically ill participants and co-relate them to the prognostic outcomes in the current medical scenario. Critical illness is a condition associated with many variables and unpredicted factors. Hence assessment of prognosis is essential for making a medical decision before treatment, as well as revealing the patient's prognosis to their family members in the earliest and most effective manner. Ayurveda explains prognosis in the context of sadhya-asadhyatha and arista lakshana. Yet there is a need to explore the relevance of arista lakshana mentioned in Ayurveda texts in current medical practice and give an evidence-based scientific rationality to it. Therefore, this study was conducted. This study was conducted on twenty-six critically ill participants admitted to the MICU of a renowned medical college hospital, presenting with arista lakshana pertaining to varna or sparsha or both, as explained in Charaka Samhita, irrespective of their disease diagnosis. The study revealed that a maximum number of arista lakshana related to varna and sparsha were found in participants of the age group 41 to 60 years. Incidence of black discolouration and abdominal distention as arista lakshana were the highest; participants had a demise which accounted for 19.20%. Hence the study concluded that assessing dosha, dushya, srotas, rogamarga, and arishta lakshana in critically ill participants holds a significant place even in the present scenario.

Keywords: Critical illness, Arista Lakshana, Varna Arista, Sparsha Arista.

INTRODUCTION

The art of disease diagnosis and its prognostic assessment in patients has been described in the treatises of Ayurveda since time immemorial. Acharyas relied on their keen and deep sense of observation to arrive at a diagnosis and assess the prognosis of diseases. Amongst all observations made by Acharyas of Ayurveda, the art of recognising signs and symptoms of Imminent death are unique and sometimes beyond the perception of the average intelligence of an ordinary man. Arista lakshana (Imminent signs of death) herald the oncoming death; just as flowers indicate the next oncoming fruit, the smoke indicates fire, and clouds indicate rain. There is no death without arista, and there will be no life after their appearance.¹

A disease should be treated only if it is curable, and the physician should know the signs that indicate the incurability of a disease; or, in other words, know to identify arista lakshana properly. The Indriya Sthana of Charaka Samhita is placed before Chikitsa Sthana in the chronology so that prior to Chikitsa, the physician should know about those conditions in which treatment will not yield its benefit and prognostic factors can be predicted based on the location of arista lakshana in concerned body parts.

Arista is an altered condition of critically ill participants in which an individual's Prakriti (homoeostatic condition) turn to Vikriti (critically abnormal condition). The features related to it must be

examined thoroughly and understood by the physician to predict a patient's life expectancy.

Arista lakshanas are broad categories into two sets.² They are purusaanashrita (those which do not appertain to the person). E.g., duta and atura kula, related symptoms; and purushashrita (those which appertain to the person). E.g., varna, twacha etc., associated symptoms. Purusaanashrita should be examined with upadesha (testimony) and yukti (logical reasoning). A careful observation of prakriti and vikriti should ascertain purushashrita.

This study was conducted on twenty-six critically ill participants admitted to MICU of a renowned medical college hospital, presenting with purushashrita arista lakshana pertaining to varna or sparsha or both, as explained in Charaka Samhita irrespective of their disease diagnosis to observe, document the fatal signs and symptoms related to varna and sparsha in critically ill participants and to apply as well as analyse their rationality in contemporary clinical prognostication.

MATERIALS AND METHODS

A clinical study was conducted on critically ill participants admitted to the MICU of a renowned medical college hospital, and the needed data was collected after following the standard operative procedure (SOP).

Study Design: It was a single arm, longitudinal, explorative, open, clinical study performed on participants with the fatal signs and symptoms of varna and sparsha as mentioned in Charaka Samhita, irrespective of their disease diagnosis.

Sample Size: An exploratory study was done on 26 critically ill participants.

Sampling Technique: Random Sampling.

Method: An exploratory study was done on 26 critically ill participants selected at random from the MICU of Yenepoya Medical College and Hospital, Deralakatte, Mangalore 575018, Karnataka, between 5-7 pm from 6th August 2022 to 8th September 2022. Information to the patient and patient write consent was taken. In situations where participants were not fit to consent, surrogate consent from family members was taken. A specially structured case proforma was prepared with an Ayurvedic understanding of critical illness assessment, and observations were documented for 7 days, from 6th August 2022 to 8th September 2022. The patients were followed up for a duration of one year or until death, whichever happened early.

An institutional ethical clearance was taken for the study YEC-1 Reference: Protocol No. YEC-1/2022/059, Dated 04/08/2022.

Inclusion Criteria

1. Participant from whom a written informed consent/ surrogate written informed consent was received.
2. Participants were admitted to the ICU of Yenepoya Medical College Hospital, Mangalore, irrespective of their disease diagnosis.
3. Participants between the age group of 16 to 100 years. (Both ages inclusive)
4. Participants, irrespective of sex, caste, religion, locality, occupation, marital status, educational status, socioeconomic status and food habits.
5. Participants with one or more of arista lakshana related to varna and/or sparsha enlisted in the Ayurveda treatise Charaka Samhita.
6. Participants having arista lakshana related to varna and sparsha caused by endogenous and exogenous factors.

Exclusion Criteria

1. Participants having purushaashrita arista lakshana other than varna and sparsha.
2. Participants having purushaanashrita arista lakshana.
3. Participants having ristaabhasa.
4. Children below 16 years of age.
5. Pregnant women, women in the purpureal period and lactating women.
6. Specially abled individuals
7. Individuals with associated psychiatric co-morbidities.
8. Participants discharged against medical advice (DAMA).
9. Participants who refused to accept/continue the Standard of Care (SoC) due to any reason.

RESULTS

Observations on the demographic findings of 26 participants are shown in the Table 1-2.

The distribution of 26 participants having the arista lakshana according to the findings of different variables are shown in the Table 3-11.

DISCUSSION

Age: Maximum patients were from the age group of 41 to 60 years. Central nervous system and cardiovascular system were involved in 8 people in each of this age group. Madhyama vaya is the criteria for krichra sadhya vyadhi.³ Among the 11 patients in the age group 41-60 years, 2 patients expired because of multi-system involvement in the following days, especially with the involvement of the central nervous system and cardiovascular system. It was observed that these patients failed to respond to treatments. 'Kriya patham atikranta' is the criteria for asadhya vyadhi.⁴ Seven participants belonged to the age group of 61 to 80 years which is vrudhava⁵ (old age). Three participants died in this category, as the cardia and brain were involved, which are sadhyo maaraneeya marma.⁶ There was also the involvement of tridosha, bahu srotas and marma. Dhatu kshaya and vataprakopa in vriddhaavastha contribute to the asadhyata (incurability) of the condition.⁷

Table 1: Age-wise distribution of the participants

Sr. No.	Age group in Year	Number of Subjects	Total Percentage
1.	00 – 20 years	01	03.84%
2.	21 – 40 years	06	23.07%
3.	41 – 60 years	11	42.24%
4.	61 – 80 years	07	26.28%
5.	81 – 100 years	01	03.84%
	Total	26	100%

Table 2: Gender-wise distribution of the 26 participants

Sr. No.	Gender	Number of Subjects	Total Percentage
1.	Male	14	53.76%
2.	Female	12	46.08%
	Total	26	100%

Table 3: System-wise involvement distributions for the 26 participants

Sr. No.	System	Number of Subjects	Total Percentage
1.	Alleged Ratal Poisoning	02	07.68%
2.	Respiratory System	01	03.84%
3.	Cardiovascular System	08	30.72%
4.	Central Nervous System	08	30.72%
5.	Genito Urinary System	07	26.88%
	Total	26	100%

Table 4: Distributions of 26 critically ill subjects according to the involvement of arista lakshana related to varna

Sr. No.	Varna		Part	Number of Subjects	Total Percentage
1.	Black	High	Foot	06	23.04%
2.	Black	High	Stool	01	03.84%
3.	Yellow	Middle	Eyes	02	07.68%
4.	Black	High	Face	01	03.84%
5.	Blue	High	Hands	02	15.36%
6.	Blue	High	Legs	01	03.84%
7.	Green	Middle	Hands	02	07.68%
8.	Pallor (localised)			15	57.60%
9.	Clubbing (fingers of hand, mainly Index Finger)			02	07.68%
Total				26	100%

Table 5: Distributions of 26 critically ill subjects according to the involvement of arista lakshana related to sparsha

Sr. No.	Features	Number of Subjects	Total Percentage
1.	Dryness	09	34.56%
2.	Unctuousness	04	15.36%
3.	Absence of Pulsation	02	07.68%
4.	High Temperature	03	11.52%
5.	Coldness of Extremities	03	11.52%
6.	Swelling of Face/Puffiness of Face	03	11.52%
7.	Swelling of Feet/Pedal Edema	06	23.04%
8.	Swelling of Legs	05	19.20%
9.	Swelling of abdomen/Distention of Abdomen	06	23.04%
Total		26	100%

Table 6: Distributions of 26 critically ill subjects according to findings of nadi (Radial artery pulse)

Sr. No.	Features of Pulse		Number of Subjects	Total Percentage
1.	Rate	>100 (Tachycardia)	07	26.88%
2.		60 – 100 (Normal)	14	53.76%
3.		<60 (Bradycardia)	05	19.20%
4.	Rhythm	Regular	14	53.76%
5.		Irregular	12	46.08%
6.	Volume	Small	05	19.20%
7.		Normal	14	53.76%
8.		Large	07	26.88%
9.	Character	Strong	14	53.76%
10.		Weak	05	19.20%
11.		Bounding	07	26.88%
Total			26	100%

Table 7: Distributions of 26 critically ill subjects as per the findings of the Glasgow coma scale

Sr. No.	Score	Main Score	Sub Score	Number of Subjects	Total Percentage
1.	3 – 8	6	E+V+M = 3+2+1	03	11.52%
2.	9 – 12	10	E+V+M = 3+4+3	05	19.20%
3.	13 - 15	14	E+V+M = 4+5+5	18	69.12%
Total				26	100%

Table 8: Distributions of 26 critically ill subjects according to the status of their prognosis

Sr. No.	Status of Prognosis	Number of Subjects	Total Percentage
1.	Recovered	01	03.84%
2.	Persistent	05	19.20%
3.	Shifted to step down ICU	12	46.08%
4.	Shifted to Higher Center	01	03.84%
5.	DAMA	02	07.68%
6.	Death	05	19.20%
Total		26	100%

Table 9: Distributions of the 26 participants according to the involvement of vikruta dosha

Sr. No.	Dosha	Number of Subjects	Total Percentage
1.	Vata – Kapha	09	34.56%
2.	Pitta – Kapha	02	07.68%
3.	Tridosha	15	57.60%
Total		26	100%

Table 10: Distributions of the 26 participants according to the involvement of marma

Sr. No.	Marma Involved	Number of Subjects	Total Percentage
1.	Sadyo Pranahara Marma	23	57.60%
2.	Kaalantara Pranahara Marma	03	42.24%
Total		26	100%

Table 11: Distributions of the 26 participants according to the involvement of srotas

Sr. No.	Srotas	Number of Subjects	Total Percentage
1.	Pranavaha Srotas	01	03.84%
2.	Rakta and Annavaaha Srotas	02	07.68%
3.	Rasa and Raktavaha Srotas	08	30.72%
4.	Majjavaha Srotas	08	30.72%
5.	Udakavaha and Mutravaha Srotas	07	26.88%
6.	Udakavaha Srotas	06	23.04%
Total		26	100%

System Involved: Multi-system involvement was observed in most of the study participants. Cardiovascular, central nervous and genito urinary systems were in the lead, proving the involvement of tri-marma⁸ (vital organs). As stated by Acharyas, any injury or disease that involves the tri-marma may cause imminent signs of death or death.

Arista Lakshana Related to Varna: Pallor and black discolouration were found in maximum patients. Pallor results from insufficient blood flow, blood loss, anaemia, or at times unknown mechanisms of the body.⁹ Anaemia is clinically relevant only when the reduced haemoglobin level results in the decreased oxygen-carrying capacity of the blood, and blood flow to the periphery/ cutaneous system may undergo wide fluctuations. Tissue hypoxia is the resultant condition.

Black skin discolouration can occur from chronic liver failure and hyperpigmentation disorders. Stools appear black due to high gut bleed (melena). These conditions are threatening to the life expectancy of an individual.

Arista Lakshana Related to Sparsha: Rukshatha (dryness) of the body and swelling of feet and abdominal distention were observed in participants. The skin's ability to retain moisture diminishes with age. Around 57.60% of cases had the predominant expression of Vata dosha; the leading quality of Vata dosha is ruksha.¹⁰ Hence dryness was observed in a maximum number of participants.

Swelling of feet was due to a compromise in renal and cardiac functions. Abdominal distention resulted due to chronic liver failure. Shotha is one of the signs of a bad prognosis. Around 19.20% of participants who developed swelling met with death in this study.

Dosha: The involvement of tridosha is generally seen in fatal and critical conditions. Among 26 critically ill patients, 57.60% of cases had vikrutha tridosha involvement while accounting for more than half the total participants in the study. Bahudoshavastha is another prominent feature of critical illness and is a criterion for asadhyatha of vyadhi¹¹ (incurable diseases), even leading to death.

Srotas: Multiple srotas usually involve in critical illness. It was observed that more than one srotas were involved in the clinical conditions of participants in this study, contributing to incurability.

Marma: Sadyo pranahara marma's involvement was seen in the participants. Cardiovascular diseases, cerebrovascular diseases and chronic kidney diseases were seen in more numbers. Shiro

(brain), hrudaya (heart) and basti (kidney) marma were involved. These marmas are predominantly composed of agni mahabhuta (fire element); agni causes instant death due to its quick nature (within 7 days).¹²

Limitations of the Study: This study was explorative on a small sample of 26 participants. Hence statistical significance was not tested due to the small sample size. This article does not include the follow-up details of the participants.

CONCLUSION

Prediction of the prognosis in critically ill participants is crucial and challenging to physicians because it includes many unpredictable factors and variables. The most common conditions causing critical illness are shock, multi-organ failure, sepsis, respiratory failure, renal failure, and cerebrovascular and cardiovascular diseases. Critical illness can be considered as pratyakhyeya vyadhi (unsuitable for treatment). Pratyakhyeya vyadhi is the one who has crossed the boundary of all treatment protocols and extended to all rogamarga (pathway of disease) in all critically ill participants bahudosha avasta (multiple dosha involvement) was observed. Tridosha involvement, bahu karana (multiplicity of causes), and bahu lakshana (multiple clinical features) are seen. More than one srotas (channels) are involved, contributing to the condition's incurability. The assessment of dosha, dushya, srothas, rogamarga and arishta lakshana in critically ill participants holds good even in the present scenario. The contemporary trend in assessing critical illness is mainly inclined towards physical examinations, biochemical parameters, and invasive and non-invasive techniques, which help better predict prognosis and prompt interventions.

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