

INDRIYE STHANA: PRAGMATIC PROGNOSTICATION OF DISEASE

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ABSTRACT

Ayurveda prioritizes disease prevention and advocates a holistic approach to managing various health conditions. Prognosis is a crucial aspect of diagnosis and treatment, as it provides patients with valuable information for making end-of-life decisions and determining the most appropriate treatments. Being *Ayurvedic* Scholars, when we talk about the art of prognosis of disease and its complications, we should admire the concept depicted by *Ayurvedic* Sheers. They had embellished many concepts with their *Divya Drishti* and *Divya Chakshu* long ago, that today's technology can't provide. The ancient *Acharya* dedicated a separate section, known as the *Indriye Sthana*, rather than *Arishta Sthana*. *Indriye* means *Prana*, i.e. the study of remaining *Ayu*. *Arishta Lakshanas* refer to signs and symptoms indicating the approaching death of a patient, analogous to how a flower indicates an upcoming fruit. According to *Ayurveda*, there are no deaths without these

indicators (*Arishta Lakshanas*), and death is inevitable after their manifestation. The techniques outlined in the *Indriye Sthana* are cost-effective, straightforward, and highly accurate for estimating life expectancy. In contemporary science, these signs and symptoms are often referred to as the Death bed phenomenon.

KEYWORDS: *Indriye, Prana, Arishta Lakshana*, Prognosis, Complications, Death Bed.

INTRODUCTION

Prognosis is a crucial aspect of diagnosis and treatment. From times immemorial, predicting prognosis has always been a key challenge to the medical profession. Patients seek access to reliable prognostic information, recognizing its pivotal role in end-of-life decision-making and the determination of appropriate treatment approaches. Within the *Brihatrayi*, *Charaka* delineated the *Arishta Sthana* within the *Indriye Sthana*, spanning 12 chapters. Conversely, *Acharya Sushruta* addressed it in the *Sutra Sthana*, while *Vagbhata* discussed it in the *Sharira Sthana*.

Apart from the *Brihatrayi*, the *Bhela Samhita* also contains the *Indriye Sthana*. "*Indra*" refers to "*Prana*," indicating that the *Indriye Sthana* is the study of remaining lifespan.^[1] *Arishta Lakshanas*, which signify impending death, are extensively detailed in the *Indriye Sthana* of *Charaka Samhita*, both preceding the *Chikista Sthana* and following the *Shareera Sthana*. This suggests that a physician should assess the *Sadhyata-Asadhyata* (treatability) of the disease and identify *Arishta Lakshanas* through *Purusha Aashrita* and *Purusha Anaashrita Parikshya bhava* before proceeding with treatment planning.^[2] *Arishta Lakshanas* are indicative signs and symptoms that give the knowledge regarding the upcoming death of a patient, much like how a flower foretells the next fruit, smoke indicates fire, or clouds herald rain. In the same way there is no death without *Arishta lakshanas* and there is definite death after the *Arishta Lakshanas*.^[2] According to *Charaka Samhita*, *Arishta* is defined as aggravated *Doshas* that manifest symptoms throughout the body, undermining the efficacy of therapeutic interventions by obstructing the healing process.^[3]

Without understanding of *Arishta*, a physician treating incurable ailments will undoubtedly lose *Vidhya* (knowledge), *Yasha* (success), and *Dhana* (wealth).^[4] Therefore, in order for a physician to be successful in their practice, they must identify the *Arishta Lakshana* according to *Ayurveda* and validate it in their daily practices using sophisticated diagnostic tools (lab and imaging procedures).

MATERIAL AND METHODS

This article is based on a review of *Ayurvedic* texts. The main *Ayurvedic* text used in this study is *Charaka Samhita*. We have also referred to the modern texts and searched various websites to collect information on the relevant topics.

ABOUT THE TOPIC

Sadyomarniye Adhyaay of *Charak* mainly comprises of understanding the signs and symptoms indicative of imminent death, particularly within 3 to 7 days, as denoted by the term “*Sadyo*”.^[5]

The primary symptoms outlined in this chapter often pertain to disorders associated with *Vata Dosha*, especially affecting regions such as the head (*Shira*), heart (*Hridaya*), and bladder (*Basti*), collectively known as *Trimarma*. Manifestations such as abnormal breathing (*Shwasa*), hiccups (*Hikka*), heart diseases (*Hridaya Roga*), and intense thirst (*Trishna*) are among the indicators of impending death described in this context. These symptoms are typically indicative of severe disturbances in the body's vital functions, particularly those governed by *Vata Dosha*. Both of these factors are elaborated below-

1. CONCEPT OF VATA DISTURBANCE

Vata is an essential factor for the sustenance of life and cognitive functions.^[6] Both somatic and psychosomatic natural physiological impulses, as well as voluntary and involuntary body motions, are governed by neural pathways. *Vata* influences these processes as well as the impulses from the cranial nerves.

- Respiratory functions, Cardiac and Circulatory activities are invariably done by *Vata*. All somatic systems and their regulatory functions and integration are controlled by *Vata*.^[7] It also controls and regulates the activities of the mind (*Manas*). The perception, cognition, and thought process is under the control of *Vata*. So, the nervous system, central nervous system or higher nervous system, brain-behavior, and mental functions are all governed by *Vata* itself.
- *Vata* governs all functions in living organisms, and its imbalance can lead to numerous illnesses and even death.^[8] Some of the *Arishta Lakshana* observed due to the imbalance of the *Vata Dosha* are flourished below-

Types of <i>Vata</i>	Related <i>Arishta Lakshana</i> mentioned	Modern correlation
<i>Prana Vayu</i>	If <i>Vata</i> get <i>Prakupita</i> in excessively weak patient causes pain in <i>Hridaya</i> and <i>Guda Pradesha</i> . ^[9]	Advanced lung cancer with pelvic bone metastasis.
<i>Udana Vayu</i>	Distension of the neck on the both sides by the aggravated <i>Vata</i> moving upwards in a patient having reduced <i>Rakta</i> (Blood) and <i>Mamsa Dhatu</i> (Muscular tissue) will cause	Common carotid artery occlusion

	death immediately. ^[9]	
<i>Samana Vayu</i>	Severe Diarrhoea, thirst associated Swollen body, severe cutting type of pain in <i>Amashaya</i> (stomach), <i>Pakvashaya</i> . ^[10]	IBD; Ulcerative colitis; Crohn's disease
<i>Vyana Vayu</i>	Movement of Vitiated <i>Vata</i> all over the body producing laxity in the calf muscles and irregularity in the structures of the nose will cause immediate death. ^[10]	Involvement of spinal cord vessels leads to meningo-myelitis and causes muscular atrophy, spastic weakness of lower extremities in 'Neurosyphilis'
<i>Apana Vayu</i>	A patient with affliction of the groins of weak/Emaciated patient by sudden aggravation of <i>Vata</i> between anus and umbilicus will cause immediate death. ^[10]	Rectal adenocarcinoma with inguinal lymph node metastasis

2. CONCEPT OF *TRIMARMA*

Since extremities are connected and dependent on trunk thereby *Marma* of trunk are more vital than *Marma* of extremities, amongst the *Marma* of trunk, *Trimarma* are utmost important.

1. *Shira*

Acharya Charak defined *Shira* as that part of body where the *Prana* resides along with all the sense organs and considered as supreme organ. Thereby *Shira* contains "*Panchgyanendriya*" i.e., sense organs and "*Indriyapranvah Strotas*".^[11]

Importance of *Shira*

- All the sense organs and the channels carrying the sensory and vital impulses from the *Shira* are like the rays from the sun.^[12]

Shiras upholds the *Indriya*, *Indriyavaha* and *Pranavaha Strotas*, as the sun rays are the parts of the sun. As *Shira* is considered as center for all *Panchindriya* thus it can be correlated to vital centers (Vagal centers respiratory centers) and centers of 12 cranial nerves, all responsible for body functioning. This verse truly signifies *Shira* as a *Trimarma* as it correlates it completely to the Brain. Thus if there is any minor injury to the organ it may lead to fatal consequences.

- Acharya Sushruta* also quotes that injury to *Shira* may lead to death of the patient.
- According to *Acharya Charak*, it may lead to facial paralysis, Eye agitation, neck-rigidity bilaterally, facial paralysis, stupefaction and constricting pain in the head, dyspnoea, loss of movement, cough, yawning fits, ptialism and aphasia.^[13]

Example- A patient along with complications like intense thirst, breathing problem, headache, syncope, weakness etc. results to diarrhea.^[14]

2. *Basti*

Basti is the term used to describe the urinary bladder, which houses and moves the urine produced by the kidneys through the ureters. *Basti* is related with reproductive organs, which, lies in pelvic cavity.

Importance of *Basti*

- *Acharya Charak* also quotes the importance of *Basti* as it acts as the Reservoir of *Mutra*. As different rivers fill the ocean in similar fashion all the *Ambuvaha Srotas* (channels) transporting water fill the *Basti*.^[15]
- According to *Acharya Sushrut*, any injury to the *Basti Marma* can lead to instant death, except for those caused by wounds (*Vrana*) and renal calculi (*Ashmari*^[16]). Severe injury to the *Basti* can result in bilateral rupture, leading to immediate death. However, if urine leakage occurs only on one side, prompt measure can save the individual.

Example- A patient with Dyspnea caused by strongly aggravated *Vayu* after having affected both the groin regions and the anus.^[17]

3. *Hridaya*

Acharya Charak has included the *Hridaya* into *Trimarma* and is a sight for *Prana*, *Budhi*, *Chetan* and *Oja* thereby indicating *Hridaya* as a vital organ in body.

Importance of *Hridaya*

- As *Hridaya* is the seat for the ten principles *Dhamani- Prana, Apana, Manas, Buddhi, Chetana* and *Sukshma Mahabhuta*, like the spokes are attached at the centre of the wheel. Hence *Hridaya* is the centre of all of them.^[18]
- In case of acute injury, internal *Dosha* disarrangement may lead to cardiac attack and eventually can be fatal. Cardiac diseases may lead to acute myocardial infarction and massive thrombosis on coronary artery leading to sudden death.

Example - A patient with intense thirst due to *Vata* aggravation leading to *Vatastheela* in *Hridaya* region can be fatal.^[18]

Thus with the above sayings the main *Rogas* that cause *Sadyomarana* are internal hemorrhages, brain injury, cerebrovascular accidents, edema of lungs, and edema inside brain.

Apart from *Sadyomarniye Adhyaay*, *Anujyotiye Adhyaay*, name itself suggests *Anu Jyoti* i.e *Mandya Agni*^[19] or slow life process as in old age. This chapter moreover reflects the old age problems as Dementia, Parkinsonism, Ataxia, visual disturbance etc.^[20]

While *Gomaychurniye Adhyaay* depicts the prognosis and life prediction according to symptoms and diseases. These are proving time-tested and can be a true help to contemporary physicians if interpreted and approached properly.^[21]

DISCUSSION

The *Ayurveda* comprises of all the necessary inputs for physicians to utilize their vast knowledge for the benefits of the human being. The whole *Indriye Sthana* reflects on symptoms, disease, and complications etc. wise *Arishta Lakshana*. In the ancient era, more importance was given to renderings of the subtle or invisible things. Their aim was to enunciate an empirical truth in a mystical way in a few letters and words (*Sutras*), but in the later era, as the revelation of the external world went on, human intelligence focused only on the revelation of gross and visible (material) elements through advanced technology and equipments. Emergence of new disease as Ebola virus, Swine Flu, COVID -19etc every decades are its mere results.

Analysis (Modern science)

Modern science express Death Bed phenomenon as the part of *Indriye sthana*.

- A variety of paranormal experiences happens not only to people who are dying but also those who are with them when they die and are emotionally much closed to the dying one.

For instance - the person associated with the dying person sees him even from many miles way, their pet starts howling or behaving indicating as they arrived. Clock's suddenly stops and electrical device spontaneously gets switched on.

- Many works are going through-out the world regarding how the brain perceives the sense and how the transmitter works when death is around the corner. One of the research suggests how the old age patients suffer from hallucination as the day remains nearby and in what sequence this happens –
- Brain plays the most important part in our life. But with the advancement of time, its function slows down due to degeneration of tissues and cells.

- In near-death experiences, the temporal lobes are crucial because this is involved in sensory processing and memory, aberrant activity in these lobes might result in odd sensations and impression.
- The fading brain concept is the most widely accepted explanation for near-death experiences.

According to this Hypothesis, hallucinations are induced by activity in the brain as cells begin to die. End-of-life dementia patients frequently exhibit Behavioral and Psychological Symptoms of Dementia (BPSD) such as delusion, anxiety, irritability, and loud yelling.^[22]

IMPORTANCE OF PROGNOSTICATION

Even *Bhagvad Geeta* says whatever thoughts prominently dominate a person's mind at the time of death determine his or her next birth.^[23]

In ancient time there was a direct relation between doctor and patient. A patient was always guided and observed under a doctor. Thus the doctor goes through examination of patients and had all the minute details of patients.^[24] Doctors can easily observe the change- *Prakriti* and *Vikriti*. But with the advancement of time, with the new hospitals arising day by day, that relationship between patient and doctor goes missing. Now we can even see the investigation reports before the patient's first look. Thus, prognostication is becoming very difficult in today's era.

Better prognostication may enable more effective patient care by empowering patients to make more educated treatment decisions. Prognostication can help in three dimensional ways to patient, attendant and doctor in the following way-

	Objectives
Patient	<ul style="list-style-type: none"> • Financial plans • Saying goodbye
Attendant	<ul style="list-style-type: none"> • Patient-centered care • Shared decision making
Clinicians	<ul style="list-style-type: none"> • Consideration of prognosis • Medical interventions • Achieving preferred place of care • Advance care planning

Accurately estimating survival times in patients with end-stage is an ongoing challenge for palliative care clinicians.

CONCLUSION

Understanding *Arishta Lakshana*, as mentioned in the prognostic section, holds significant importance for physicians in estimating a patient's life expectancy and planning appropriate treatment protocols. Merely skimming through *Ayurvedic* texts without critical analysis and interpretation may lead to overlooking this ancient knowledge. It's crucial to consider the historical context of these texts and the limitations of technology and equipment during that time. Physicians must rely on their expertise to interpret omens, predict patient lifespan, and devise suitable treatment strategies. Despite advancements in healthcare in terms of sophisticated equipment, technologies, and other life-saving procedures, predicting life expectancy and prognosis for certain diseases remains a challenge. While further research is needed to validate the claims made in this article, the current study breaks the ice for future research endeavors.

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