

CONTEMPORARY RELAVANCE OF THE CONCEPT OF SHANKA VISHA - A REVIEW ARTICLE

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ABSTRACT

Shanka visha (Poisoning phobia/Imaginary fear of poisoning) is the unique concept mentioned in *Ayurveda*, where other *Acharyas* has given the name *Sarpaṅgābihata*. It is about fear of intoxication. Fear is a response towards the action from the body to make ready for the further damage. The story of rope and the snake is very popular among the people. This story is about frighten state of mind, it is due to the darkness and previous knowledge about the snake, there are manifestation of certain symptoms which simulates that of the symptoms of snake bite. There cause brain responses causing the physiological and pathological changes in the body. In this article an attempt will be made to understand the *Shanka Visha* with the help of modern pathophysiology.

KEYWORDS: *Shanka visha*, *Sarpaṅgābihata*, Panic attack, Amygdala.

INTRODUCTION

In *Samhitas* we get the references regarding the *Suras* (gods) and *Asuras*(demons) conducted *Samudra Manthana* (churning of the ocean) to get the *Amruta* (nectar), before the origin of *Amruta*, *Visha* (poison) got emerged causing depression to the whole world.^[1] The definition of the *Visha* itself gives the meaning of depression. Depression represents the involvement of mind along with the body in the manifestation of the symptoms due to poisoning. But, in the concept of *Shanka Visha* mind or psychology of a person plays major role which affects the body. *Shanka visha* is the concept mentioned by *Acharyas* in different names. *Acharya*

Charaka coined the term *Shaṅka visha* and *Acharya Sushruta* explained in terms of *Sarpangābhihata*, whereas *Vagbhata* explained both the types. All of these concepts mainly based on the fear induced which can be defined as the neurophysiological processes that prepare an organism to perform innate or learned responses to cope with danger.^[2] When we come across the concept of *Visha* including *Shaṅka Visha*, psychological factors play a very important role for the manifestation of the symptoms or for aggravation of the symptoms. It is well known that in case of *Shaṅka visha* there is no actual envenomation, it is the state of mind which causes manifestation of toxic symptoms. Hence, there is a need of basic understanding regarding the factors which are behind the symptoms developed. This article is the compilation of the psychological factors which plays major role in *Shaṅka Visha* and its pathophysiology in terms of contemporary science.

MATERIALS AND METHODS

This article is based on the compilation and correlation of the information collected from *Samhitas*, contemporary textbooks, articles and other references.

1. *Acharya Charaka* says, if a person comes in contact with object(rope etc), got bite(non-poisonous) or prick by unknown creature in darkness which creates suspicion of being bitten by the poisonous creatures, he will develop certain symptoms such as *Jwara*(fever), *Chardi* (vomiting), *Moorcha* (giddiness/fainting), *Daaha* (burning sensation), *Glani* (prostration), *Moha* (unconsciousness) and *Atisaara* (diarrhea). This condition is called as *Shaṅka visha*.^[3]
2. *Acharya Sushruta* and *Vagbhata* says, person is in fear when get touched by some part of snake accidentally, aggravated *Vata* produces *Shopha* (swelling) at site of touch this is known as *Sarpangābhihata*.^[4]

UNDERSTANDING OF EACH LAKSHANA USING MODERN CONCEPT

1. *Jwara* - Fear induced Fever/ psychogenic fever

In some condition patient may develop extremely high core body temperature (up to 41 degree C) when they exposed to emotional events such as fear. Animal studies shows that the mechanism of the infectious fever (which requires proinflammatory mediators) differs from that of psychogenic which affects the sympathetic nervous system, particularly beta3-adrenoceptor- mediated non shivering thermogenesis in brown adipose tissue, plays major role in development of psychogenic stress induced hyperthermia. Acute psychological stress

when the person get fear in darkness induces a transient, monophasic increase in the body temperature.^[5]

2. *Chardi* – vomiting and *Atisaara* - diarrhea

Vomiting and diarrhea often accompany anxiety because of gut-brain axis. This axis connects central nervous system (CNS) to the enteric nervous system (ENS), which acts as gut nervous system. The ENS regulate processes in gastrointestinal tract (GIT), but also has an effect on emotions and behavior.^[6]

When a person is anxious, brain releases neurotransmitters, which put the body into a high state of alert. Some neurotransmitters enter the digestive tract where they can upset the gut microbiome – the delicate balance of microorganisms that live inside the gut results in nausea, vomiting and diarrhea.^[7]

3. *Murcha* (giddiness/fainting) and *Mada* (unconsciousness)

When a person undergoes acute emotional trigger due to fear, causes people to faint. This condition is called vasovagal syncope or situational syncope. Vasovagal syncope happens when the part of the nervous system that controls heart rate and blood pressure overreacts to fear. When heart rate slows and blood vessels widen causes the blood pressure to drop. When that happens, body cannot deliver blood to brain where the person loses consciousness.^[8]

According to Dr Sue Corcoran, a cardiologist at Baker Heart and Diabetes Institute in Australia, says “if we are scared or anxious, we release adrenaline (epinephrine), which is one of our “fight and flight” hormones. It acts to help us run away from bad things. One of the ways it does this to send blood to the legs. If we don’t run away, it adds more blood going to the legs and less to the head and makes someone who is prone to fainting more likely to do so in those circumstances.”^[9]

4. *Glani* – prostration – adrenal fatigue and mental fatigue

Adrenaline crashes causes adrenal fatigue – when body experience anxiety due to fear, it triggers sympathetic nervous system which causes the increase in breathing accompanying surge of stress hormones – including adrenaline which energizes the body at the moment but makes fatigue afterwards.^[10]

Fear / anxiety is naturally tiring because it causes ups and downs in energy levels, which leads to incredibly drained. Some people feel tired throughout the day while others only after an anxious attack.

Post muscle tension – fear causes profound muscle tension throughout the day, results in drained feeling.

Fear is linked with stressful thoughts and an overactive brain. It taxes cognitive capacities, leads to a drain on ability to think and react.^[11]

5. *Daaha* (burning sensation)

Most of the people who get panic attacks experience a burning sensation – a feeling of heat, itching and irritation of skin which causes uncomfortable and even frightening. The burning sensation may be inside the body, localized in one spot, many spots, or throughout the body. When the body experiences fear it causes the rush of adrenaline which affects multiple properties within the body. Chemically, anxiety changes the balance of hormones and neurotransmitters. Which constrict the blood vessels and sends a rush of blood to other areas. Stress due to anxiety triggers fight and flight response this causes many psychological and physiological changes, one of these changes is the blood is being redirected from the skin to other more vital body parts this process can lead to nerve stimulation causes burning sensation.^[12]

6. *SHOPHA* (SWELLING)

Anxiety has been linked to a number of physical conditions. One among them is swelling. It is potentially possible for anxiety to create swelling. Some studies shown that anxiety can cause a bit of swollen liver, it's possible they may contribute to mild swelling in joints or other areas of the body. Indeed, stress weakens immune system slightly which may make more likely to get mild infection. Which causes lymph node enlargement.^[13]

DISCUSSION

Shankha visha or *Sarpangābihata* is the condition manifested due to the fear leads to various psychological and clinical signs and symptoms which is purely caused due to the fear. The behavioral reaction is such that it produces aggressive response to the threat. The fear response manifest from the perception of danger which leads to fight-or-flight response. In contemporary science the phobias via the amygdala there they use glucocorticoids, and for

psychological conditions they use cognitive behavioral therapy. By confronting the fear in a safe manner, a person can suppress the “fear-triggering memories” or stimuli.^[14]

It is intensely unpleasant emotion in response to perceiving or recognizing a danger or threat. Fear causes physiological changes that may produce behavioral reactions. By the visual misunderstanding there comes the role of amygdala. Evidence shows that CeA (Central nucleus of amygdala) is a site of plasticity and memory formation. And its activity subjected to tight regulation. It affects the periaqueductal gray and paraventricular nucleus of the hypothalamus. Fear conditioning involves the repeated pairing of neutral conditioned stimulus with a noxious unconditioned stimulus such that later presentation results in fear behaviors. Amygdala is actually a collection of distinct nuclei that plays separate role but complementary roles in the acquisition, expression, and extinction of fear. Electrical stimulation and lesioning studies show that the CeA plays a role in generating stress responses. Physiological changes that are fight-or-flight responses, which causes increased breathing (hyperventilation), heart rate, peripheral vasoconstriction, increasing muscle tension along with the muscle attachment of the hair follicle causing “goosebumps” clinically piloerection, sweating, increase blood glucose (hyperglycemia), increase serum calcium, increase in WBC called neutrophilic leucocytes, butterflies in the stomach (dyspepsia).^[15]

Systemic desensitization, is a type of behavioral therapy used to completely remove the fear and replace it.^[16]

In ayurveda classics the management of *Shan̄ka Visha* has been mentioned. *Acharya Vagbhata* mentioned *Sita*, *Vaigandhika*, *Draksha*, *Payasa*, *Madhuka* and *Madhu* which is consumed in the form of drink. Among these ingredients most of them are having *Vata Shamaka* properties. Along with that water sanctified by holy hymns to sprinkle, consoling, providing pleasant things and environment and confidence boosting measures are mentioned.^[17]

Basically, both the treatment measures of ayurveda and contemporary suggests the suppression of the anxiety and its symptoms manifested due to the fear factors. Not only in the acute conditions but most of the symptoms manifested in chronic phobias are based on the same theories explained and the management which can be adopted.

CONCLUSION

In *Shanka Visha* fear factors which affects the person both physically and mentally. Contact non-living things, bite of non-venomous or venomous effectively manifest the symptoms of *Shanka Visha*. Modern pathophysiology concepts such as beta3- adrenoceptor- mediated non shivering thermogenesis, enteric nervous system (ENS), vasovagal syncope, Adrenaline crashes and the role of amygdala helps to validate the concept along with, it also helps for the better understanding under scientific basis. Concept has a relevance in treatment protocol based on the symptoms. Paper helps for further research works in the management of the condition.

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