

Management of Apasamara (Epilepsy) Through Yoga

Kanchan Chowdhury

Assistant Professor, Deptt. of Swasthavritta and Yoga, FOA, IMS, BHU

Abstract

Epilepsy (In Ayurveda, Apasmara) appreciates a unique status as rather being a special symptom complex than a single disease entity. Yoga is an age-old traditional Indian psycho-philosophical-cultural method which has a potential to alleviate epilepsy and other seizure disorders. According to Ayurveda, Epilepsy is characterized by Occasional unconsciousness associated with abhorrent activities (like vomiting, froth, and abnormal postures of the body), due to perversion of memory, intellect and other psychic faculties. Apasmara has been clearly noted in various Classical ayurvedic texts like Caraka Samhita, Susruta Samhita and also in vedas, puranas etc. Ayurveda described the etiological factors, premonitory symptoms along with different clinical features of Apasmara. With the help of Seershasana, Balasana, Uttanapadasana, Veeparitkaranimudra, and Pranayama we can have a great control over frequent epileptic seizures. Yogic Asanas, Pranayama, Relaxation and Meditation Techniques have been recommended as one of the additional method of treatment in the holistic management of chronic intractable epilepsy. Research carried out at the All India Institute of Medical Sciences (AIIMS, New Delhi) found that meditation improved the brain wave activity of people with seizure disorders leading to a reduction in seizures. In a similar study conducted in the United States concluded that patients who learned to control their breathing had an improvement in their seizure frequency. Different Yogic modules are being discovered as a new and valuable approach to exercise self-control of seizures.

Keywords: Apasmara, Epilepsy, Pranayama, Seershasana, Veeparitkaranimudra, Yoga

"If I wished to show a student the difficulties of getting a truth from medical experience, I would give him the history of epilepsy to read."

Oliver Wendell Holmes

INTRODUCTION:

Epilepsy (In Ayurveda, Apasmara) appreciates a distinctive status as rather being a special symptom complex than a single disease entity. It has allured and charmed the most brilliant minds of both past and present. Yoga is an age-old traditional Indian psycho-philosophical-cultural method which has a potential to alleviate epilepsy and other seizure disorders. Spans of enormous interpretations and critical analysis have only paved way to further queries regarding the complex mechanisms that finally led to the manifestation of this disease. The commonly practiced yogic methods are 'Asanas' (physical postures), 'Pranayama' (controlled deep breathing) and 'Dhyana' (meditation) admixed in varying proportions with differing philosophic ideas. These give the many schools of yoga practice such as Hatha Yoga, Karma yoga, Bhakti yoga. Patanjala Yoga involves behavioural commitments in life, to

reinforce the psyche at intellectual (yama) and emotional (niyama) levels. Kundalini Yoga deals with control of hidden life energy ('kundalini'), in relation to external stimuli, so as to finally achieves awareness of a particular pattern of its working and to be able to control conscious experience of external inputs.

DEFINITION OF APASMARA (EPILEPSY):

According to Ayurveda, Epilepsy is characterized by Occasional unconsciousness associated with loathsome activities (like vomiting, froth, and abnormal postures of the body), due to perversion of memory, intellect and other psychic faculties.¹ The above are the invariable symptoms of epilepsy as one cannot see anything in the darkness (tamahpravesha), so also a patient suffering from epilepsy cannot understand anything i.e. becomes unconscious.

ETYMOLOGY OF APASMARA:

The term Apasmara in Ayurveda is a combination of two words viz. 'Apa' and 'Smara'

The term 'Apa' means Parivarjana, i.e. loss.ⁱⁱ The meaning of 'Apa' is described as Gamana i.e., to go down.ⁱⁱⁱ According to Monier Williams, the word 'Apa' when used as a prefix means away, off, back down. The term 'Smara' indicates 'Smrti' which has been attributed many meanings in the literature. But its meaning in the context of **Apasmara is as follows:**

Smrti is defined as BhutarthaVijnana i.e. knowledge of past experience.^{iv} It is described as SmarahSmaranam i.e. ability to remember; recollect.^v According to Monier Williams, the word 'Smara' is derived from 'Smr' Dhatu meaning memory, recollection, remembrance etc.

The terms 'epilepsy' and 'epileptic' are derived from the Greek word epilepsia and have the same root as the verb 'epilambanein' which means 'taking hold or seizing'. Epilepsy therefore means seizure. Hence the word epilepsy was used to denote both the disease and the single attack in the past.

SYNONYMS:

AngaVikrti, Lolanga and BhutaVikriya are the three synonyms of Apasmara.^{vi} These terms generally refer to the body postures and movements during an attack.

HISTORICAL BACKGROUND:**VEDAS, UPANISADS AND PURANAS-**

There are references regarding Apasmara in the hymns of Atharva Veda.^{vii} Its genesis was attributed to various non-human forms like spirits, Gandharvas, YakshaRaksasas etc. There are references of Apasmara being invoked by Daksa against Lord Siva who in turn subdued the former. Lord Nataraja pressing his right foot on Apasmara demon and performing dance have been described in Puranas.

CARAKA SAMHITA -

Apasmara has been considered one among the eight Praguttana diseases at the time of DaksaYajna. The kind of individuals susceptible to the disease has been described in the 8th chapter of NidanaSthana along with Nidana, PurvaRupa, PratyatmaLaksana, Rupa and Samprapti.^{viii} The possibility of AgantujaApasmara along with the Dosaja types has also been considered by Caraka in the same chapter. The Chikitsa has been described in detail in the 10th chapter of ChikitsaSthana.^{ix}

SUSRUTA SAMHITA -

The description of the paroxysmal nature of the disease has been the major contribution made by Susruta. The Nidana, Rupa, Samprapti and Cikitsa have been described in detail in the 61st chapter of UttaraTantra. The opinion regarding Apasmara as a DosajaVyadhi and not an Agantuja type has been given in the same chapter. It has been considered as a MahaVyadhi.^x

ASTANGA SANGRAHA AND ASTANGA HRDAYA -

The Nidana, PurvaRupa, Rupa, Samprapti and Cikitsa of Apasmara have been described in the 10th chapter of the UttaraTantra. It has been described as MahaMarmaSamasraya.^{xi} The same has been described in the 7th chapter of the UttaraTantra of AshtangaHridaya.

KASYAPA SAMHITA -

The Laksanas of the Vyadhi in infants have been described in the Vedanadhyaya which is the 25th chapter of Sutra Sthana.

BHELA SAMHITA -

The Nidana, Rupa and Samprapti have been explained in the 8th chapter of NidanaSthana. An interesting description regarding the paroxysmal nature of the disease can be found in the 4th chapter of SariraSthana. The term 'Rasa Vega' has been used and held

responsible for the manifestation of Apasmara.^{xiii} The comparison of Apasmara Vega to that of Trtiyaka and CaturthakaVisamaJvaras has been made in the same chapter. Trauma has been emphasized as one of the etiological factors while describing the Nidana and Chikitsa is also described in the 9th chapter of ChikitsaSthana.

HARITA SAMHITA -

Apasmara has been mentioned as one of the MahaVyadhis in the 1st chapter of TrtiyaSthana. The Laksanas along with Samprapti and Chikitsa have been described at length in the 18th chapter. The Udana and Prana are vitiated along with other Dosas according to his opinion. The most striking feature is the mention of Siras as the site of Dusti. The Vega Laksanas are described in detail in BalarogaChikitsa i.e., the 57th Chapter of TrtiyaSthana along with Vegakalinachikitsa.

SARNGADHARA SAMHITA -

The four types of Apasmara have been enumerated in the 7th chapter of PrathamaKhandha.

MADHAVA NIDANA -

The Nidana, Rupa, Samprapti and SadhyaAsadhyata have been described in brief in the 21st chapter.

NIDANA (ETIOLOGICAL FACTORS):

The types of individuals who are prone to develop Apasmara rapidly are described by Caraka.^{xiii}

When the mind of an individual is overshadowed by Rajas and Tamas, When the doshas get exceedingly aggravated and their equilibrium is disturbed, When an individual takes food consisting of unclean and unwholesome ingredients possessing mutually contradictory properties (or touched by the unclean hands of persons suffering from contagious diseases like Kustha), neglecting the prescribed dietetic rule, When he restoresto unhealthy regimens and behavior and When he suffers from excessive debility. In the situation

above, the doshas get aggravated and attach the persons whose minds are overshadowed by rajas and tamas. The doshas (so aggravated) permeate the heart i.e. the abode per excellence of the soul as well as the sense organs. While staying there, the doshas aggravated by force of passion, anger, fear, greed, attachment, excitement, grief, anxiety, perturbation etc., all of a sudden, spread throughout the heart and the sense organs. Then the individual falls as a victim of epilepsy.

PURVARUPA (PREMONITORY SYMPTOMS):

Ayurveda has clearly mentioned few premonitory symptoms of epilepsy. It should be identified during this period so as to avoid unnecessary complications. It is also said that, if it is treated in earlier stages, treatment becomes successful.

The followings are the premonitory symptoms – Contraction of eye brows, Irregular movement of eyes constantly, Hearing of such sounds which are non-existent, Excessive discharge of saliva and nasal excreta, Disinclination for food, anorexia, indigestion, Cardiac Spasm (Hridayagraha), Distention of lower abdomen with gargling sound, Weakness, cracking pain in the bones and malaise, Unconsciousness, entering into darkness, fainting and giddiness, and Frequent appearance of scenes of intoxication, dancing, murdering, aching, shivering and falling in the dreams. Thereafter the epilepsy is manifested.^{xiv}

RUPA (CLINICAL FEATURES):

The clinical features are very specific and distinct in accordance with various doshikinvolvements.

The followings are the characteristic features of different types of Epilepsy:^{xv}

Vatika (Where VataDosh is involved):

- Losing and regaining consciousness instantaneously, Projection of eye balls, Incoherent speech, Vomiting of frothy

matter, Excessive heaviness and rigidity of neck, Bending of the head to one side, Irregularly contracted finger, Instability of upper and lower limbs, Reddishness, dryness and brownishness of nails, eyes and face skin when the Vision is unstable, fickle, coarse Aggravation of the conditions by such regimens as are aggravators of vata ,Alleviations of conditions by such regimens as are alleviators of vata

Paittik (Where Pitta Dosha is involved):

- Loosing and regaining consciousness instantaneously
- Stertorous breathing
- Rubbing the earth
- Green, yellow or coppery colour of nails, eye, face and skin
- Vision of bleeding, terrifying(which is also injurious) frightful, burning and angry looking objects
- Aggravation of the condition by such regimens as are aggravators of pitta, and
- Alleviation of the condition by such regimens as are alleviators of pitta

Slaishmik (Where Kapha Dosha is involved):

- Delay in loosing and regaining consciousness
- Falling down
- Absence of much distortion of activities
- Dribbling of saliva
- White color of nails,eye,face ,skin
- Vision of white , heavy and unctuous objects
- Aggravation of the condition by such regimens as are aggravators of sleshma, and
- Alleviation of the condition by such regimens as is alleviators of Kapha.

Sannipatika (Caused by the simultaneous vitiation of all the three Doshas):

- Epilepsy of this type shares the symptoms of all the three doshas. This condition is incurable.

YOGIC THERAY AND EPILEPSY:

Epilepsy is a complex phenomenon with many paradoxical aspects.Approximately 50 million people worldwide have epilepsy,^{xvi} making it one of the most common neurological diseases globally.On an average, 15 per cent of patients remain epileptic despite taking more than two drugs. One of the reasons for frequent seizures is that high levels of stress lead to release of hormones (like glucocorticoids, neuropeptides and corticotrophin-releasing hormone) that excite brain cells, resulting in seizures. Yoga maintains the functional harmony between body and mind, and enhances blood circulation, lowering stress levels," says Sumitra R K, yoga therapist and consultant with Vivekananda Yoga Anusandhana Samsthana, Bangalore.^{xvii} Yoga therapy with Yogic postures, Pranayama, Relaxation and Meditation Techniques has been recommended as one of the additional method of treatment in the holistic management of chronic intractable epilepsy. Forward bending and inverted asanashelp in bringing awareness and concentration to the head region and increase in sensory-motor rhythm, decreasing stress and possibly influencing brain plasticity. If the reason for convulsions is psychosomatic these Yogasanas and Pranayama will revitalize the patient and his life will be rejuvenated.

YOGASANAS -

Sarvangasana, Uttanpadasana, Seershasana, Shashankasana, Veepareetkaranimudra etc. are considered most promising in controlling epileptic events. Both Sarvangasana and Viparitakarnimudra can be very helpful in alerting brain with its sensory nerves and system of consciousness and understanding. Uttanpadasana,

Veeparitakarnimudra or practice of Sarvangasana can be helpful to pump in blood to the head in extra quantities. Although it is true that head gets maximum blood by practice of Seersasana, the patient of convulsions should under no circumstances practice ordinary Seershasana. For such patients, there are other methods to take blood circulation to the head. One can sleep with face pointing upwards on a table or a cot keeping the head hanging down. In this process the back is at the bottom, abdomen is in the top, both legs are kept together, the palms of the hands point downward and head hanging. In this position the head is at a lower level than the heart. Therefore the head gets supply of blood in greater proportion. This asana should be performed initially from half a minute to one minute. Gradually the time could be increased between five to ten minutes. Even after performing this asana, it is essential to perform Savasana. We should perform Savasana for half the period for which we perform the main Asana. In Shashankasana, the head goes lower than the heart, so it has to work less in pumping the blood to the brain. By lying in this position the blood circulation to the head is increased.

Stress, among other things, triggers the frequency of epileptic seizures -a disorder of the central nervous system characterized by loss of consciousness and convulsions. There is evidence that shows stress results in sudden and unexplained deaths in epileptic patients. A study conducted at the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, suggests certain forms of yoga, along with regular treatment, can help reduce seizures in patients suffering from refractory epilepsy. Patients suffering from refractory epilepsy get more than two seizures every month.^{xviii}

Epileptologist Dr. Nandan Yardi, head of the Yardi Epilepsy Clinic, Kothrud, Pune, India, speaks of the "Yoga," when writing about

seizure disorders. He points out that seizures, like physical diseases, result when there are imbalances in the various physical and psychological systems (unions) of the body. Yoga is one of the oldest formal practices known whose purpose is to restore this balance.^{xix}

The "asanas" or "yogasanas" aid in restoring balance to the body and its metabolic systems. Practicing asanas increase physical stamina and calm the nervous system. Asanas [e.g. Balasana (Child's Pose)etc], used as a physical exercise alone, improve circulation, respiration, and concentration while decreasing the chances of having a seizure.

PRANAYAMA -

As a person slips into a seizure state,he/she should reflexively catch and hold their breath, as if startled or frightened. This causes changes in metabolism, blood flow, and oxygen levels in the brain. The practice of pranayama, i.e. controlled deep diaphragmatic breathing helps restore normal respiration, which can reduce the chances of going into a seizure or stop seizures before they become full blown.

Nadishodhan Pranayama - Nadis are subtle energy channels in the human body that can get blocked due to various reasons. The NadiShodhan pranayama is a breathing technique that helps clears these blocked energy channels, thus calming the mind. This technique is also known as AnulomVilom pranayama.

It is an unfailing panacea for mental peace and composure. We are normally not aware of our inhalation and exhalation. This is such a process which is self-propelling. Our body has nine openings for conveying sensations by sensory nerves and performing actual work. But the nose is the principal opening by which we perform respiration. If one keeps oneself slightly aware of this process then a very good achievement can be had in avoiding cerebral disorder.

Bhramri Pranayama - Bhramari Pranayama with sound created similar to the humming of the black bee and chanting very long Omkara helps upgrade the nervous system enormously.

Omkara Dhyana-Releases accumulated stress in the mind and body effectively and helps relax.

Practicing relaxation techniques, such as omkaradhyanis well known as a definitive aid in seizure control.

AVOID:

- Any practice that involves fast breathing (Hyperventilation) could trigger off an attack and hence is contra indicated (e.g. Kapalabhati, Bhastrikaetc).
- Balancing postures are to be avoided.
- Trataka is very useful. Avoid doing Trataka on candle light.
- Avoid all refined foods, fried and greasy foods, sugar and product made with it as these causes kaphavarana and disturbs pranavayu flow inside the brain.Strong tea coffee, alcoholic beverages, condiments and pickles –should be taken in a very small quantity.

GUIDLINES:

- An epileptic must avoid excitement of all types. His sexual life must be severely restricted.
- Whenever one feels attack is coming, loosen the dresses; apply wet pack on neck, stomach, hands and feet.
- If we observe someone suffering from such convulsions while we are passing along a road we should shift that person to a place on side where it is quiet and breeze is blowing. He will suffer less suffocation if his clothes are loosened. He needs to lie down normally. In order that he may not chew his tongue and may not damage his teeth some soft padding should be introduced in between two rows of teeth.

- If a child gets convulsions he must be admitted immediately to the hospital.
- A person who gets convulsions should be kept in social surroundings which would encourage him. He should be kept away from such conditions which can make him feel dejected or sorrowful.
- If the sufferer from epilepsy has taken strong drugs for many years, he should not leave off entirely all at once. Gradually yoga can be introduced and the dosage may be cut down. The epileptic patient should be encouraged to lead as normal a life as possible but some activities are unacceptably risky like swimming and driving and should be avoided.
- Avoid negative emotions such as anxiety, fear, hostility, insecurities, mental worries and tensions.

RESEARCH IN YOGA FOR SEIZURES:

In 1996, The Indian Journal of Medical Research published the results of a study on the effects of "Sahaja Yoga" practice on seizure control. The study was not large enough to be considered conclusive. However, its results were so promising; the study caught the attention of researchers in Europe and the North America. In this study, a group of patients with epilepsy practicing "Sahaja Yoga" for six months experienced an 86 per cent decrease in their seizure frequency.^{xx}

Research carried out at the All India Institute of Medical Sciences (AIIMS, New Delhi) found that meditation improved the brain wave activity of people with seizure disorders leading to a reduction in seizures.^{xxi} In a similar study conducted in the United States concluded that patients who learned to control their breathing had an improvement in their seizure frequency. Dr. Steven Pacia is currently conducting a study at the New York University Comprehensive Epilepsy Center on the use

of yoga to decrease seizures in epileptic persons.^{xxiii} Satyanarayana et al. Satyanarayan, M., Rajeshwari, K.R., Rani, N.J., Krishna, C.S. and Rao, P.V. Effect of Sandhikriya on certain psychological parameters: a preliminary study. *Indian Journal of physiology and pharmacology* 1992; 36: 88-92 demonstrated increased alpha activity in prefrontal and occipital areas of the brain in eight subjects performing Shantikriya yoga (a combined breathing and relaxation technique), however no randomization or controls were used.

One study, funded by the Central Council of Research in Yoga and Naturopathy, was conducted on two groups—one that practiced yoga and the other that did simple exercises. Regular epilepsy medication was administered to both the groups.

The Yoga practiced Surya namaskar, Chakrasana, Bhujangasana, Salabhasana and Sava sanafollowed by Pranayam for 20 minutes, six days a week. There was significant improvement in those who practiced yoga, including two who were completely cured, says T N Sathyaprabha, associate professor, neurophysiology, NIMHANS. The other group that was asked to do simple exercises showed higher physiological stress compared to the yoga group. No other significant changes were observed in the non-yoga group. The study was published in *Epilepsy and Behavior* (Vol 12, No 2). Mahesh Kuriyal, a psychiatrist from Dehradun says epileptic patients tend to seclude themselves. "Yoga as an adjuvant therapy can help regain the psychological fear by lowering stress levels." Nandkishore, a neurologist from Dehradun says a detailed study can yield positive treatment for epilepsy patients but it is too early to say that yoga can reduce seizures.^{xxiiii} Various results indicate that continued meditation practice is of substantial help in improving the clinico-electrographic picture in drug-resistant epilepsies.

Behavioural methods are presently being tested for seizure reduction since some people with epilepsy do not achieve seizure control despite regular and adequate medication. However, such studies are lacking and the results are convicting. Often the studies are small, some are anecdotal, not randomized or controlled making their conclusions complicated to accept in the light of scientific exercise. There are few studies related to yoga and seizure control and the two randomized, controlled studies discussed have methodological problems that do not allow the results to be acknowledged completely. Studies on yoga cannot be blinded (single or double) for obvious reasons and actually need to be double-sighted, so as to guarantee the accuracy of the yoga by the yoga teacher and for correct relation of the yoga experience by the subject to the evaluators. A multi-centre, cross-cultural, 'double-sighted', well-randomized controlled trial, especially using a population of a standardized epilepsy syndrome such as juvenile myoclonic epilepsy, is justified to find out the beneficial outcome of a single yoga method protocol on seizure control and quality-of-life issues.

CONCLUSION:

Once epilepsy is diagnosed, it is important to begin treatment as soon as possible. Most people with epilepsy lead outwardly normal lives. While epilepsy cannot currently be cured, for some people it does eventually go away. Most seizures do not cause brain damage. It is not uncommon for people with epilepsy, especially children, to develop behavioral and emotional problems, sometimes the consequence of embarrassment and frustration or bullying, teasing, or avoidance in school and other social setting. For many people with epilepsy, the risk of seizures restricts their independence (some states refuse drivers licenses to people with epilepsy) and recreational activities. Most women with epilepsy can become pregnant, but

they should discuss their epilepsy and the medications they are taking with their doctors. Women with epilepsy have a 90 percent or better chance of having a normal, healthy baby. Although researches are lacking in effect of yoga of epilepsy in pregnancy. Respiratory system is the main stand for mental consciousness. If the respiration process is regularized, the convulsions that one gets due to latent fears, doubts, misunderstandings or mental problems can surely be reduced.

Yoga defines this internal imbalance as an excessive activity to situation (known/unknown) at ManomayaKosa. This speed 'Vega' at the ManomayaKosa triggers off very high electrical potentials in too many nerve cells in different parts of the brain. This heightened activity sends down a big shock that shows up as altered consciousness and body movements. Yoga therapy aims at developing master over these excitations by training to develop an internal balance through technique of slowing down of activity at all levels. It is the deep rest to the mind body complex that heals.

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