



## EPILEPSY (APASMAR) & ROLE OF AYURVEDA IN ITS MANAGEMENT

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### ABSTRACT :

In prevalence, about 1% of people worldwide (65 million) have epilepsy and nearly 80% of cases occur in developing countries. Epilepsy is characterized by recurrent, episodic, paroxysmal, involuntary clinical events associated with alternation of cerebral function. An epileptic attack is an abrupt and excessive electric discharge of cerebral neurons. *Ayurveda* explains imbalance in the three *doshas vata, pitta and kapha* singly or all of them together can cause *Apasmar*. Aggravated *doshas* get accumulated in *hridaya* and produce the features based upon *Doshic* predominance, which cause illusion of the mind and visual hallucination and seizures (tonic spasms and clonic jerks). Often it is presented with outwarding tongue, deviation of the eyes, dribbling of saliva with froth, tonic and clonic movements of limbs. Modern antiepileptic drugs suppress the seizure, but do not cure the disorder and having adverse effects, contraindications and sometimes requires lifetime treatment. *Ayurveda* believes in balancing humours (*dosha*) to remove the root causes of the disorders and normalize the brain activity. It is achieved by multifactorial approach of *Ayurveda* that includes *shaman, tikshna sanshodhan, rasayan chikitsa, sattvavajaya chikitsa*.

**Key words:** Epilepsy, *Apasmar*, *Ayurveda*.

**INTRODUCTION:** Epilepsy is a group of neurological diseases characterized by epileptic seizures. Epilepsy is one of the most common serious neurological disorders affecting about 65 million people globally. In prevalence, about 1% of people worldwide (65 million) have epilepsy and nearly 80% of cases occur in developing countries. In the developed world onset of new cases occurs most frequently in infants and the elderly, and in the developing world this is in older children and young adults<sup>1</sup>. Epilepsy is characterized by recurrent, episodic, paroxysmal, involuntary clinical events associated with alternation of cerebral function. An epileptic attack is an abrupt and excessive electric discharge of cerebral neurons. Epilepsy is a condition where there is a

transient loss of consciousness in the patient for a certain period of time which may vary from few seconds to few minutes with or without falling down<sup>2</sup>. *Ayurveda* explains imbalance in the three *doshas vata, pitta and kapha* singly or all of them together can cause *Apasmar*. Aggravated *doshas* get accumulated in *hridaya* and produce the features based upon *Doshic* predominance, which cause illusion of the mind and visual hallucination and seizures (tonic spasms and clonic jerks). Often it is presented with outwarding tongue, deviation of the eyes, dribbling of saliva with froth, tonic and clonic movements of limbs<sup>3</sup>.

**Material and method :** Conceptual study- For this all the verses that dealt with Epilepsy w.s.r to *Apasmar* were taken under

specific headings. The etiopathogenesis , symptomatology were taken from Ayurveda & modern medical texts, research

articles, internet sources, Ayurveda data base.

**Disease review and Discussion: Aetiology of Apasmar ( Nidan )<sup>3,4</sup>:**

| <i>Aaharaj Nidan</i>                                    | <i>Viharaj Nidan</i>                         | <i>Mansika &amp; Indriyarth Nidan</i>                             | <i>Doshaj Nidan</i>         |
|---|--|---|-----------------------------|
| <i>Vibhrant Bahu Doshanam, Ahita , Ashuchi Bhojanat</i> | <i>Vega Vinigrah Silanam</i>                 | <i>Rajas Tamobhyam Vihate Satve</i>                               | <i>Unmarg-Gaami Dosha,</i>  |
| <i>Virudha, Malina Ahar</i>                             | <i>Virudha, Malina Vihar</i>                 | <i>Chinta, Kaama, Bhaya, Kro dha, Shoka, Udvega</i>               | <i>Visham Bahu Doshanam</i> |
| <i>Vaishmya ukten upayog Vidhinopyunjanam</i>           | <i>Gachhatam Rajas-walam</i>                 | <i>Manasya Abhigate</i>   | <i>Prakupita Doshah</i>     |
|   | <i>Tantra prayogamapi cha vishamachartam</i> | <i>Mithya-Atiyogendriyarth Karmanam Abhisevnat</i>                |                             |
|   | <i>Visham sarir chesta, Atichhayada</i>      | <i>Kayika, Vachika, Mansika Karma- Ayoga, Atiyoga, Mithyayog.</i> |                             |

**Aetiology of Epilepsy (Modern sciences)<sup>1,2,5,6</sup>:**

**Idiopathic:** In primary generalized seizure, simple partial seizure, focal motor seizures of childhood the cause is unknown. Some genetic predisposition may be a factor.

**Secondary causes:** Seizures occur due to cerebral disorder or non-cerebral disorder i.e.

- Infective causes- Encephalitis, Cerebral Malaria, Aseptic, Tubercular Pyogenic Meningitis, Intracerebral Abscess, Neurocysticercosis, Toxoplasmosis, HIV.
- Metabolic disorders Hypoglycemia, Hyponatremia, Hypocalcemia, Hypokalemia, Hypomagnesemia, And Hepatic Encephalopathy, Ketoacidosis, Non-Ketotic Hyperosmolar Coma.
- Cerebrovascular disorder Cerebral Infarction, Cerebral Hemorrhage, Vasculitis Syndrome, Tumors, Asphyxia
- Trauma (Including Neurosurgery).

**Pathogenesis (Samprapti): By Ayurvedic Literature<sup>3, 7, 8</sup>:**

Acharya Charak described that, when a person having vitiated mind with raja and tama takes *visham evam malin ahar*, and takes food against rules, behaves against *tantra* and performs *visham chesta* then vitiated and unmarg-gami doshas get accumulated in the *hriday* i.e. place of *mana* and *manovah srotas*. It results in much vitiation of these place by chance in the presence of *kama, krodha, bhaya, lobha, moha, harsha, shoka, chinta, udvega* etc. which results in *Akshep* (convulsions). (*Ch.nidan 8/4*) The characteristic features of *Apasmar* are occasional loss of consciousness, feeling of entering into darkness and hallucination (*pashyatya asanti rupani*). It is often presented with falling down suddenly, outwarding tongue, deviation of eyes, dribbling of saliva with tonic clonic movements of the limbs (*Akshep*). This stage may last for few seconds to few minutes till doshas present in these

vitiated places and then passes to relaxation phase when doshas vega diminish. (Ch. Chikitsa 10/7).

**Pathogenesis (According to modern medical sciences) <sup>1, 2</sup>** :In the normally functioning cortex, recurrent and collateral inhibitory circuits limits synchronous discharge amongst neighbouring groups of neurons.Epileptic cerebral cortex exhibits hypersynchronous repetitive discharges involving large groups of neurons. Intracellular recordings shows bursts of rapid action potential firing, with reduction of transmembrane potential. Hyper synchronization- means that a hyper excitable neuron will lead to excessive excitability of a large group of surrounding neurons excessively fired leading to clinical manifesta-

tion of seizure.Cells undergoing repetitive epileptic discharges undergo morphological and physiological changes which make them more likely to produce subsequent abnormal discharges (kindling).

It is likely that both reduction in inhibition systems and excessive excitation play a part in genesis of seizures activity. Hyper excitability results due to increased excitatory neurotransmission decreased inhibitory neurotransmission Alternation in voltage gated ionic channels intra/ extracellular ionic alternations in favor of excitation.

Excitatory Neurotransmitters: Glutamate  
Inhibitory Neurotransmitters: GABA-two types :A and B

**Premonitory Symptoms (Purvaroop) :**

| Premonitory Symptoms <sup>1, 2, 6</sup> (modern medical sciences). | Purvaroop <sup>3</sup> (ch.nidan 8)        |
|--|--|
| Deviation eyes.  | Bhruyyudasa, Akshnovaikritam               |
| Auditory hallucinations.   | Asabda shravana                            |
| Loss of interest in food .   | Anannabhilasanama                          |
| Excessive salivation or nasal discharge.                           | Lala singhana prasavarana                  |
| Gurgling sound in stomach.   | Kuksheratopa, Arochaka, Avipaka            |
| Feeling of darkness.   | Tamas darsanam                             |
| Giddiness.   | Murchha, Bhrama                            |
|  | Hrida-graha /Hrida kampa / Hrida sunyata   |
|  | Daurbalya, Asthibhed, Angamard             |
|  | Moha / Mudhata                             |
|  | Nartana, Vyadhana, Vyathana, Vepana, Patan |
|  | Sweda                                      |
|  | Dyanam                                     |
|  | Nidra Naas                                 |

**Symptoms:**

| Symptoms/Signs <sup>1,2,6</sup>                                    | Lakshan <sup>4</sup> (Su.Ut. 61 / 9-10) |
|--|---|
| Unstable Clonic Tonic Movements Of Limbs, Constriction Of Fingers. | Hasta Paad Vichepa                      |
| Eye And Head Deviation To One Side                                 | Vijimha-Bhru-Vilochane                  |
| Teeth Biting.  | Dantan Khadan                           |
| Dribbling Of Frothy Saliva.  | Phena Vaman                             |
| Eye And Head Deviation To One Side                                 | Vivritaksh                              |

|                                 |   |
|---------------------------------|---|
| Involuntary Speech Or Murmuring | Pateta Chhitau(Bhumi Patan)               |
| Convulsions Expiratory Dyspnoea | Alpa Kalantaraschapi Punah Sangya Labhte. |

### Classification Of Epileptic Seizures<sup>1</sup>:

The most common type (60%) of seizures are convulsive, of these 1/3 as generalized seizures and 2/3 begin as partial seizure

that progress to generalized seizures. The remaining 40% are non-convulsive e.g. absence seizure.

|  |
|--|
| <b>Types of seizures<sup>1,2,6</sup></b>   |
| Partial seizures ( focal seizure ) When paroxysmal neuronal activity is limited to one part of the cerebrum. 1-Simple Partial Seizure If consciousness is preserved<br>2-Complex Partial Seizure- If consciousness is affected ( temporal or frontal lobes)<br>3-Partial Seizure With Secondary Generalization. ( Further spread into diencephalon and thence throughout the remainder of the cortex)  |
| Generalized seizures: When electrophysiological abnormality involves both hemispheres simultaneously and synchronously. 1.Generalized Tonic Clonic Seizure ( Grand Mal Epilepsy) 2.Absence Seizure ( Petit Mal Epilepsy-in childhood)- If the abnormal electrical activity fails to affect muscle tone and loss of consciousness but patient remains standing or sitting.<br>3.Atonic Seizure.<br>4.Myoclonic Seizure(Myoclonic Jerk).<br>5.Others: Atypical Absence Seizure, Infantile Spasm, |
| Status epilepticus:<br>1.Generalized Tonic Clonic Status Epilepticus, 2.Epilepsia Partialis Continua.<br>3.Absence Seizure Associated Status Epilepticus   |

### Types of apasmar according to Ayurveda

<sup>3, 4</sup> All acharya said four types of apasmar: Vataj, pittaj, kaphaj, sannipataj.

### ROLE OF AYURVEDA IN THE MANAGEMENT OF EPILEPSY (APASMAR)<sup>3, 4, 9, 10</sup> -

- Removal of Etiological Factors (*Nidan parivarjan*)<sup>3</sup>.
- *Shodhan chikitsa*<sup>3</sup>: Tikshna shodhan is indicated in Apasmar (*cha.chi.10/14-15*),

The first step for awakening of heart channels and mind blocked by doshas (humors) by drastic *shodhan* procedures that are,

- *vasti* (medicated enemas)-*vataja apasmar*,
- *virechana* (purgation)-*pittaja apasmar*,
- *vamana* (emesis)-*kaphaja apasmar*.

• *Bahi Parimarjana Chikitsa*: *Utshadan, avashechan* (*cha.chi.10/39* pg 476), fumigation (*dhupan*), *anjan*<sup>3</sup> (*cha.chi.10/50-52*)

• *Rasayana Chikitsa*- As it is a chronic disease, one should use the *Rasayana* drugs like *Shankhpushpi*, *medhya rasayan*, *brahmi swaras*, *kustha swaras* or *vacha* with *madhu* etc<sup>3</sup>. (*cha.chi.10/62,64,65* pg 477)

• *Sattvavajaya Chikitsa*- It is a non-pharmacological approach for treating the mental disorder, it comes under *ad-ravya-bhut chikitsa*. When epilepsy is associated with extrinsic factors, then mantras have been recommended<sup>3</sup>. (*cha.chi.10/63* pg 477)

• *Avasthika Chikitsa*: during the treatment of seizures, the primary aim is to bring back the consciousness of the patient

so *acharya charak* prescribed *Pradhama nasya* to awake the heart channels<sup>8</sup> and *indriya ayatanani* (mind)<sup>3</sup>.(cha.chi.10/45 pg 476)

• **Siravedha:** The only first-aid measure recommended in epilepsy is blood-letting from veins of temples<sup>4</sup> (Shu.Sharir 8/17 pg381).

• **Shamana Chikitsa:** It includes oral use of different single and compound Herbo -mineral formulations. Drug formulations have been recommended only after the patient has been cleaned by all means of shodhan and consoled well<sup>3</sup> (cha.chi10/16 pg 475).

Some formulations are given below:

| Type of formulation | Name of formulations   |
|---------------------|--|
| <b>churna</b>       | <ul style="list-style-type: none"> <li>✓ <i>Saraswat churna</i><sup>3,11</sup></li> <li>✓ <i>Jatamansi churna</i><sup>3,11</sup></li> <li>✓ <i>Aswagandha churna</i>,<sup>3,11</sup></li> <li>✓ <i>Vacha churna</i><sup>3,11</sup></li> <li>✓ <i>Kalyanak churna (Bhavprakas)</i></li> </ul> |
| <b>taila</b>        | <ul style="list-style-type: none"> <li>✓ <i>Katbhyadi taila</i><sup>3</sup></li> <li>✓ <i>Palankasadi tail</i><sup>3</sup></li> </ul>  |
| <b>ghrit</b>        | <ul style="list-style-type: none"> <li>✓ <i>Panchagavya ghrita</i><sup>3</sup></li> <li>✓ <i>Mahapanchagavya ghrita</i><sup>3</sup></li> <li>✓ <i>Kusmanda ghrita</i><sup>12</sup></li> <li>✓ <i>Brahmi ghrita</i><sup>12</sup></li> </ul>   |
| <b>kwath</b>        | <ul style="list-style-type: none"> <li>✓ <i>Mansyadi kwatha</i><sup>13</sup></li> </ul>  |
| <b>aasav-arista</b> | <ul style="list-style-type: none"> <li>✓ <i>Aswagandharista</i><sup>14</sup></li> <li>✓ <i>Saraswatarista</i><sup>15</sup></li> </ul>  |
| <b>ras ausadhi</b>  | <ul style="list-style-type: none"> <li>✓ <i>Chaturbhuj rasa (Rasendra Sar Sangrah, Unmad Chikitsa)</i></li> <li>✓ <i>Smriti sagar rasa</i><sup>16</sup></li> </ul>   |

**CONCLUSION:** On the basis of above study it is concluded that a detailed description regarding etiology, pathogenesis, sign and symptoms along with treatment of *Apasmar* is also given in *Ayurveda* as given in modern medical science. Modern antiepileptic drugs suppress the seizure, but do not cure the disorder and having adverse effects, contraindications and sometimes requires lifetime treatment. *Ayurveda* believes in balancing humours (*dosha*) to remove the root causes of the disorders and normalize the brain activity. It is achieved by multifactorial approach of *Ayurveda* that includes *shaman, tikshna sanshodhan, rasayan chikitsa, sattvavajaya chikitsa*. By using these ap-

proaches we can control or cure Epilepsy (*Apasmar*).

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