

UNVEILING THE MYSTERY OF APASMARA: EXPLORING ITS CORRELATION TO CHILDHOOD EPILEPSY.

Dr. Indrajeet S. Gadge^{1*}, Dr. Somya O. Singh²

¹Assistant Professor, Department of Kaumarbhritya Tantra, Siddhakala Ayurved Mahavidyalaya, Sangamner.

²Assistant Professor, Department of Rachana Sharir, Siddhakala Ayurved Mahavidyalaya, Sangamner.

Article Received on
29 August 2023,

Revised on 19 Sept. 2023,
Accepted on 09 Oct. 2023

DOI: 10.20959/wjpr202318-29991

*Corresponding Author

Dr. Indrajeet S. Gadge

Assistant Professor,
Department of
Kaumarbhritya Tantra,
Siddhakala Ayurved
Mahavidyalaya, Sangamner.

ABSTRACT

“Apasmara” is a distinct clinical entity and deal with *Graharogas*. In *Vedas*, it is told that the disease *Apasmara* is nothing but a disease attributed to the attack by the female *Graha Jambha*, as Mentioned in *Rugveda*, *Yajurveda* and *Atharvaveda*. According to *Vagbhata*, it occurs due to destruction of memory and results from loss of wisdom and consciousness when mind gets deranged by worry, grief, fear. All three *vata*, *pitta* and *kapha doshas* are vitiated in *Apasmara*. Its symptoms are much like the epilepsy disorder in modern science. When a child has a series of seizures 2 or more with unknown aetiology, it is diagnosed with epilepsy. Early diagnosis of Epilepsy helps to reduce further physical and psychological consequences.

These children face unacceptance by the society. It is need to aware people about the epilepsy as much as possible.

KEYWORDS: *Ayurveda*, *Apasmara*, Epilepsy, Convulsions, Seizures.

INTRODUCTION

Apasmara is in existence in the Indian society and worldwide from ancient times. References of this notorious disease are found in *Vedic Literature*. In *Vedas*, it is told that the disease *Apasmara* is nothing but a disease attributed to the attack by the female *Graha Jambha*, as Mentioned in *Rugveda*, *Yajurveda* and *Atharvaveda*. *Apasmara* has been recorded in the *Samhitas* Like *Charak Samhita*,^[1] *Sushruta Samhita*^[2] etc. Most of the diseases of the children come under *Graharoga*. However, *Acharya Charak* and many other *Acharyas*

describe *Apasmara* as a distinct clinical entity and deal with *Graharogas* separately. *Charaka* traces the origin of the disease to *Daksha Yadhnya*. It is considered as one of the eight *Adyotthana* diseases (Firstly engendered disease) at the time of *Daksha Yadhnya*. *Acharya Charak* explains that when the *Yadhnya* of *Daksha Prajapati* was destroyed; all the living beings became panic and started running haywire for their lives. During this commotion some of them touched unhygienic objects and creatures. During this act; those who were contaminated; suffered from *Apasmara*.^[3] The incidence and prevalence of *Apasmara* (Epilepsy) varies in different countries.^{[4][7]} India is home to nearly 10 million people suffering from *Apasmara* (Epilepsy) [Prevalence of about 1%].^[8] The incidence is lower in urban part of India (0.6%) and is higher in rural part of India (1.9%).^[9-10] The data mentioned itself underlines the importance of *Nidan* of *Apasmara* in paediatric age group [Etiological background]. So, the causative factors are identified and preventive measures are taken to minimize the incidence of this dreaded disease.

MATERIAL AND METHODS

The *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, *Kashyap Samhita*, *Madhavanidanam* were studied for appropriate references regarding concept of *Apasmara*. Critical and conceptual analysis was done for the proper understanding.

Definition of Apasmara

स्मृतेरपगमं प्राहुःपस्मारं भिषग्विदः।

तमःप्रवेशं बीभत्सवेष्टं धीसत्त्वसम्प्लवात्॥३॥

Apasmara explained as the "going away of memory" and describe it as a condition marked by blackouts (a sense of slipping into darkness) and revolting motions brought on by the fusion of the intellect and the psyche.^[11]

Nidan (Etiopathology) of *Apasmara* According to *Ayurveda Literature*^[12]

विभ्रान्तबहुदोषाणामहिताशुचिभोजनात्

रजस्तमोभ्यां विहते सत्त्वे दोषावृते हृदि॥४॥

चिन्ताकामभयक्रोधशोकोद्वेगादिभिस्तथा

मनस्यभिहते नृणामपस्मारः प्रवर्तते॥५॥

<i>Charak Samhita</i> ^[13]	<i>Sushruta Samhita</i> ^[14]	<i>Ashtang hridaya</i> ^[15]	<i>Madhav nidan</i> ^[16]
<i>Chinta</i> (Worry/Anxiety)	<i>Indriya Mithya Yoga-Ati-yoga-Heena Yoga</i> (Excessive/Improper use of Sensory organs)	<i>Chinta</i> (Worry/Anxiety)	<i>Viruddha Bhojana</i> (Incompatible food)
<i>Kama</i> (Passion)	<i>Kayik-Vachik-Manasika-Mithya yoga –Atiyoga-Hinayoga</i> (Excessive/Improper behavioural-Mental-Verbal activities)	<i>Bhaya</i> (Fear)	<i>Dushta Bhojana</i> (Harmful Food)
<i>Bhaya</i> (Fear)	<i>Viruddha Aahara</i> (incompatible food)	<i>Shoka</i> (Grief)	<i>Apavitra Bhojan</i> (Impure Food)
<i>Krodha</i> (Anger)	<i>Malina Aahara</i> (Impure, dirty food)	<i>Ahita Annapana</i> (Unwholesome, harmful Food)	<i>Devata, Guru, Brahmin Apamana</i> (Insult of God, elderly people and the revered people)
<i>Shoka</i> (Grief)	<i>Rajahswala Stree Sam- bhoga</i> (coitus during menstruation.	<i>Vikruta Bhojana</i> (Dirty Food)	
<i>Udvega</i> (Excitement/Agitation)		<i>Asatmya An- napana</i> (Incompatible Food)	
<i>Ahita Bhojana</i> (Unwholesome, harmful Food)		<i>Malin annapana</i> (Impure food)	
<i>Apavitra Bhojana</i> (Unhygienic Food)		<i>Visham anna</i> (Improper or irregular practice of dietetics.	
		<i>Pujya Vyakti Apamana</i> (Disrespect/ insult of the revered and elder people)	
		<i>Vishama cheshta</i> (Hideous body movements)	

Pathogenesis of *Apasmara*^[17]

धमनीभिः श्रिता दोषा हृदयं पीडयन्ति हि।

सम्पीड्यमानो व्यथते मूढो भ्रान्तेन चेतसा॥६॥

पश्यत्यसन्ति रूपाणि पतति प्रस्फुरत्यपि।

जिह्वाक्षिभ्रूः स्रवत्लातो हस्तौ पादौ च विक्षिपन्॥७॥

The heart is harmed (by the aforementioned circumstances) by doshas found in the arteries (or *dhamani*, channels that transmit nutrients). People suffer as a result of their confused minds.

Person experiences visual hallucinations, falls over, experiences trembling in his tongue, eyes, and brows, as well as the extension or bending of his hands and legs.

Types of *Apasmara*

पृथग्दोषैः समस्तैश्च वक्ष्यते स चतुर्विधः॥८॥

Apasmara is of four types including those due to separate *doshas* (*vata*, *pitta* and *kapha*) and due to combination of all (*sannipatika*).^[18]

1. *Vataj Apasmara*

कम्पते प्रदशेदन्तान् फेनोद्गामी श्वसित्यपि

परुषारुणकृष्णानि पश्येद्रूपाणि चानिलात्॥९॥

The symptoms of *vataj apasmara* include trembling, teeth grinding, frothing at the mouth, and gasping. The patient experiences visual hallucinations of rough, reddish-brown, or black objects.^[19]

2. *Pittaj Apasmara*

पीतफेनाङ्गवक्त्राक्षः पीतासृग्वपदर्शनः

सत्पृष्णोष्णानलव्याप्तलोकदर्शी च पैतिकः॥१०॥

The body, face, and eyes of the *Paittika apasmara* are all yellowish in color. Hallucinations of yellow or blood-red objects appear to him. He experiences thirst, a heated sensation (a sense of heat), and he notices fire all around him.^[20]

3. *Kaphaj Apasmara*

शुक्लफेनाङ्गवक्त्राक्षः शीतो हृष्टाङ्गजो गुरुः

पश्यन्मुक्त्वानि रूपाणि श्लैष्मिको मुच्यते विरात्॥११॥

The *shlaishmika apasmara* is distinguished by whitish foam (from the lips), a cold feeling throughout the body and face, as well as heaviness from the stiffness of the body. The patient experiences white object hallucinations and makes a slow recovery.^[21]

4. *Sannipataj Apasmara*

सर्वैरैतैः समस्तैस्तु लिङ्गैर्ज्ञेयस्त्रिदोषजः

अपरमारः स चासाध्यो यः क्षीणस्यानवश्च यः॥१२॥

All of the aforementioned traits manifest simultaneously in *Sannipataj apasmara*. The condition known as *Apasmara* is fatal. The chronic form of *Apasmara*, which affects those who are severely underweight, is likewise fatal.^[22]

While describing *Vyadhi*, *Acharya Sushruta* has mentioned seven types. 15 These seven types are again divided into two types each.

<i>Adibalapravrutta Vyadhi</i>	<i>Matruja</i>
	<i>Pitruja</i>
<i>Janmabalapravrutta Vyadrhi</i>	<i>Rasakruta</i>
	<i>Dauhridapacharkruta</i>
<i>Doshabalapravrutta Vyadhi</i>	<i>Amashaya Samuttha</i>
	<i>Pakwashaya Samuttha</i>
<i>Sanghatabalapravrutta Vyadhi</i>	<i>Shastrakruta</i>
	<i>Vyalakruta</i>
<i>Kalabalapravrutta Vyadhi</i>	<i>Vikruta Rutujanya</i>
	<i>Avikruta Rutujanya</i>
<i>Daivbalapravrutta Vyadhi</i>	<i>Vidyut Ashanikruta</i>
	<i>Pishachchakruta</i>
<i>Swabhavabalapravrutta Vyadhi</i>	<i>Kalakruta</i>
	<i>Akalakruta</i>

Management of *Apasmara*

तैरावृतानां हृत्स्रोतोमनसां सम्प्रबोधनम्।

तीक्ष्णैरादौ भिषक् कुर्यात् कर्मभिर्वमनादिभिः॥१४॥

The heart, channels and mind which are obstructed by *doshas* shall rouse up or cleared first by strong remedial measures like *vamana* (emetic therapy) etc.^[23]

Purification based on *dosha* dominance

वातिकं बस्तिभूयिष्ठैः पैतं प्रायो विरेचनैः।

श्लैष्मिकं वमनप्रायैरपस्मारमुपाचरेत्॥१५॥

Treatment plans for *Vatika apasmara*, *Paittika apasmara*, and *Shlaishmika apasmara* should focus primarily on *basti* (medicated enema), *virechana* (purgation), and *vamana* (emesis), respectively.^[24]

Assurance and counselling therapy

सर्वतः सुविशुद्धस्य सम्यगाश्वासितस्य च।

अपस्मारविमोक्षार्थं योगान् संशमनाच्छृणु॥१६॥

Following the proper purification achieved by all of the aforementioned treatments and the provision of a health guarantee, the formulas for *apasmara* pacification are now explained.^[25]

Panchagavya ghee

गोशकृद्रसदध्यम्लक्षीरमूत्रैः समैर्घृतम्

सिद्धं पिबेदपरमारकामलाज्वरनाशनम्॥१७॥

इति पञ्चगव्यं घृतम्

Ingredients of *panchagavya ghee*

Juice of cow dung, sour curd prepared out of cow's milk, cow's urine in equal quantity and cow's ghee.

Indications

The medicated ghee shall be taken for treating *apasmara*, *kamala* (jaundice) and *jwara*. (26)

***Mahapanchagavya ghee*^[27]**

द्वे पञ्चमूत्र्यौ त्रिफला रजन्यौ कुटजत्वचम्

सप्तपर्णमपामार्गं नीलिनीं कटुरोहिणीम्॥१८॥

शम्पाकं फल्गुमूलं च पौष्करं सदुसलभम्

द्विपलानि जलद्रोणे पक्त्वा पादावशेषिते॥१९॥

भार्गी पाठां त्रिकटुकं त्रिवृतां निचुलानि च

श्रेयसीमाढकीं मूर्वां दन्तीं भूनिम्बचित्रको॥२०॥

द्वे सारिवे रोहिषं च भूतीकं मदयन्तिकाम्

क्षिपेत्पिष्ट्वाऽक्षमात्राणि तेन प्रस्थं घृतात् पचेत्॥२१॥

गोशकृद्रसदध्यम्लक्षीरमूत्रैश्च तत्समैः

पञ्चगव्यमिति ख्यातं महत्तदमृतोपमम्॥२२॥

अपरमारे तथोन्मादे श्वयथातुदरेषु च

गुल्मार्शः पाण्डुरोगेषु कामलायां हलीमके॥२३॥

शस्यते घृतमेतत् प्रयोक्तव्यं दिने दिने

अलक्ष्मीग्रहरोगघ्नं चातुर्थकविनाशनम्॥२४॥

इति महापञ्चगव्यं घृतम्

Ingredients of *mahapanchagavya ghee*

Two *palas* (80 gms) of each of.

Bilva, *shyonaka*, *gambhari*, *patali*, *ganikarika*, *shalaparni*, *prishniparni*, *brihati*, *kantakari*, *gokshura*, *haritaki*, *bibhitaki*, *amalaki*, *haridra*, *daruharidra*, Bark of *kutaja*, *saptaparna*, *apamarga*, *nilini*, *katurohini*, *Shampaka* (*aragvadha*), root of *phalgu* (*kasthodu-mbarika*),

pushkaramula and *duralabha*. Two *dronas* of water should be added to the *bilva*, which should then be boiled and reduced to one fourth (in the recipe, one *drona* is mentioned; nevertheless, it should be taken in double the amount). One *aksha* (each weighing 12 grams) The paste of *bharangi*, *patha*, *shunthi*, *maricha*, *pippali*, *trivrita*, *nichula* (*hijjala*), *shreyasi* (*hastipippali*), *adhaki*, *murva*, *danti*, *bhunimba*; *chitraka*, *shveta sariva*, *krishna sariva*, *rohisha*, *bhutika*, and *madayantika* along When used to cure (the following), this medicinal ghee, known as *mahapanchagavya*, is like ambrosia.

Indications

Apasmara (epilepsy), *unmada* (insanity), *shvayathu* (edema), *udara* (obstinate abdominal diseases including ascitis), *gulma* (abdominal lumps), *arshas* (piles), *pandu* (anemia), *kamala* (jaundice) and *halimaka* (a serious type of jaundice). This medicated ghee should be used regularly every day to dispel inauspiciousness and evil effects of bad planets. It also cures *chaturthaka* (quartan) type of *vishama jwara* (irregular fever).

Brahmi ghrita^[28]

ब्राह्मीरसवचाकुष्ठशङ्खपुष्पीभिरेव च।

पुत्राणं घृतमुन्मादातक्ष्म्यपरमारपापनुत्॥२७॥

Cow's ghee processed with the juice of *Brahmi*, *Vacha*, *Kushtha*, and *Shankhapushpi* cures *Unmada*, *Laxmi* (inauspiciousness), *apasmara* and *papa* (effects of sins, or evil deeds).

Saindhavadi Ghrita^[29]

घृतं सैन्धवहिङ्गुभ्यां वर्षे बास्ते चतुर्गुणे।

मूत्रे सिद्धमपरमारहृद्ग्रहामयनाशनम्॥२८॥

Cow's ghee (one part) should be cooked by adding (in total) four parts of the urine of bull and goat and the paste of rock salt and asafoetida (1/4th part in total). This medicated ghee cures *apasmara* (epilepsy), heart diseases and diseases caused by the evil effects of planetary misalignment.

Vacha-shampakadi ghrita^[30]

वचाशम्पाककैटर्कवयःस्थाहिङ्गुचोरकैः।

सिद्धं पलङ्कषायुक्तैर्वतश्लेष्मात्मके घृतम्॥२९॥

Ghee (one part) should be cooked with the paste of *vacha*, *shampaka*, *kaitarya* (*parvata nimba*), *vayastha* (*guduchi*), *hingru*, *choraka* and *palankasha* or *guggulu* (1/4th part in total). (Four parts of water should be added according to the general rule, because in present recipe,

there is no liquid). This medicated ghee is useful in the treatment of *vatika* and *shlaishmika* types of epilepsy.

***Jivaniya Yamaka Sneha*^[31]**

तैलप्रस्थं घृतप्रस्थं जीवनीयैः पलोन्मितैः।

क्षीरद्रोणे पचेत् सिद्धमपस्मारविनाशनम्॥२८॥

Two *prasthas* (in the text actually one *prastha* is mentioned; double the quantity is taken according to the general rules of definition) of each of oil and cow's ghee should be added with the paste of one *pala* of each of the ten drugs belonging to *jivaniya gana* (vide Sutra 4: 9) and two *dronas* (in the text one *drona* is prescribed; double the quantity is taken according to general rules of definition) of milk, and cooked. This medicated ghee is an effective recipe for the cure of *apasmara* (epilepsy).

कंसे क्षीरिक्षुरसयोः काश्मर्येऽष्टगुणे रसे।

कार्षिकैर्जीवनीयैश्च घृतप्रस्थं विपाचयेत्॥२९॥

Two *prasthas* of ghee should be added with one *kamsa* of each of milk and sugarcane juice; sixteen *prasthas* of the decoction of *kasmarya* and one *karsa* of each of the ten drugs belonging to *jivaniya* group (vide Sutra 4: 9) and cooked. This medicated ghee instantaneously cures epilepsy caused by *vata* and *pitta*.^[32]

वातपित्तोद्धवं क्षिप्रमपस्मारं नियच्छति।

तद्वत् काशविदारीक्षुकुशक्वाथशृतं घृतम्॥३०॥

Similarly, ghee cooked by adding the decoction of *kasha* and *kusha* and the juice of *vidari* and sugarcane is useful in the treatment of this ailment.^[33]

मधुकद्विपले कल्के द्रोणे चामलकीरसात्।

तद्वत् सिद्धो घृतप्रस्थः पित्तापस्मारभेषजम्॥३१॥

Two *prasthas* of ghee should be cooked by adding two *dronas* of juice of *amalaki* and two *palas* of the paste of *madhuka*. This medicated ghee instantaneously cures the *paittika* type of *apasmara* (epilepsy).^[34]

Drugs for external application^[35]

अभ्यङ्गः सार्षपं तैलं बस्तमूत्रे चतुर्गुणे।

सिद्धं स्याद्रोशकृन्मूत्रैः स्नानोत्सादनमेव च॥३२॥

कटभीनिम्बकट्वङ्गमधुशिब्रुत्वचां रसे।
 सिद्धं मूत्रसमं तैलमभ्यङ्गार्थे प्रशस्यते॥३३॥
 पलङ्कषावचापथ्यावृश्चिकाल्यर्कसर्षपैः।
 जटिलापूतनाकेशीनाकुलीहिङ्गुचोरकैः॥३४॥
 लशुनातिरसाचित्राकुष्ठैर्विड्भिश्च पक्षिणाम्।
 मांसाशिनां यथालाभं बस्तमूत्रे चतुर्गुणे॥३५॥
 सिद्धमभ्यञ्जनं तैलमपरम्पारविनाशनम्।
 एतैश्चैवौषधैः कार्यं धूपनं सप्रलेपनम्॥३६॥

Massage therapy for epilepsy patients can benefit from mustard oil that has been prepared using goat urine four times. For unction and *snana* (bath), such a patient should utilize cow dung and urine, respectively.

Cooking should be done with one part of (sesame) oil, one part of (goat's) urine, and three parts of a decoction made from the barks of *katabhi*, *nimba*, *katvanga*, and *madhushigru*. This medicinal oil works wonders for massage.

The pastes of *palankasha* (*guggulu*), *vacha*, *pathya*, *vrischikali*, *arka*, *sarshapa*, *jatila*, *putanakesi* (*golomi*), *nakuli*, *hingu*, and *choraka* should be used to make siddha taila.^[34]

Depending on what is available, *lasuna*, *atirasa* (*jalaja yastimadhu*), *chitra*, *kustha*, and the stool of meat-eating birds are also acceptable.

Cooking sesame oil requires four times as much goat urine and a medicine paste (1/4 of the oil). The treatment of *apasmara* (epilepsy) with this medicinal oil is quite beneficial. The medications (recommended ingredients to be applied externally in paste form) should also be used for fumigation and *pralepana* (external application in paste form) (to treat patients with epilepsy).

पिप्पलीं लवणं चित्रां हिङ्गु हिङ्गुशिवाटिकाम्।
 काकोलीं सर्षपान् काकनासां कैटर्यचन्दने॥३७॥
 शुनःस्कन्धास्थिनखरान् पर्शुकां चेति पेषयेत्।
 बस्तमूत्रेण पुष्यर्क्षे प्रदेहः स्यात् सधूपनः॥३८॥

Pippali, rock-salt, *chitra* (*danti*), *hingu*, *hingushivatika* (*vamsa-patrika*), *kakoli*, *sarshapa*, *kakanasa*, *kaitarya*, *chandana* and shoulder bones, nails and ribs of the dog should be made

to a paste by triturating with goat's urine in the constellation of *pusya* (8th *nakshatra*, or constellation, per Vedic astrology). Use of this for *pradeha* (external application in the form of thick paste) and *dhupana* (fumigation) cures epilepsy.^[36]

अपेतराक्षसीकुष्ठपूतनाकेशिवोरकैः।

उत्सादनं मूत्रपिष्टैर्मूर्ध्निरेवावसेचनम्॥३९॥

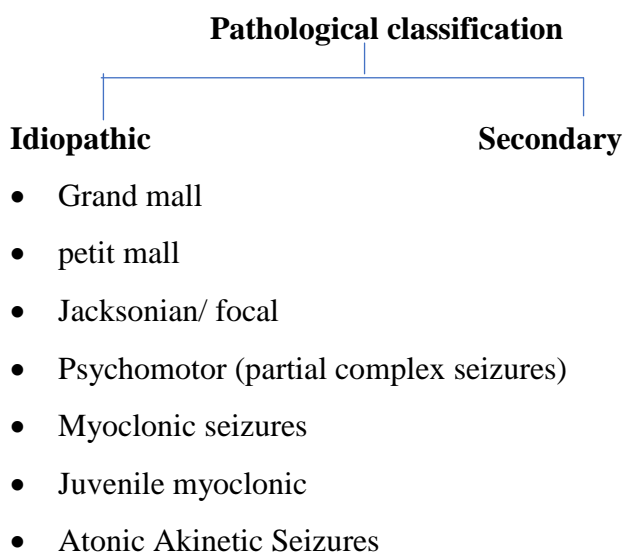
Juice of *apetarakshasi* (*tulasi*), *kushtha*, *putanakeshi* (*jatamansi*) and *choraka* should be triturated by adding (cow's or goat's) urine and made to a paste. This should be used as unction (for the treatment of epilepsy). The body of the patient should be sprinkled with the urine (of cow or goat).^[37]

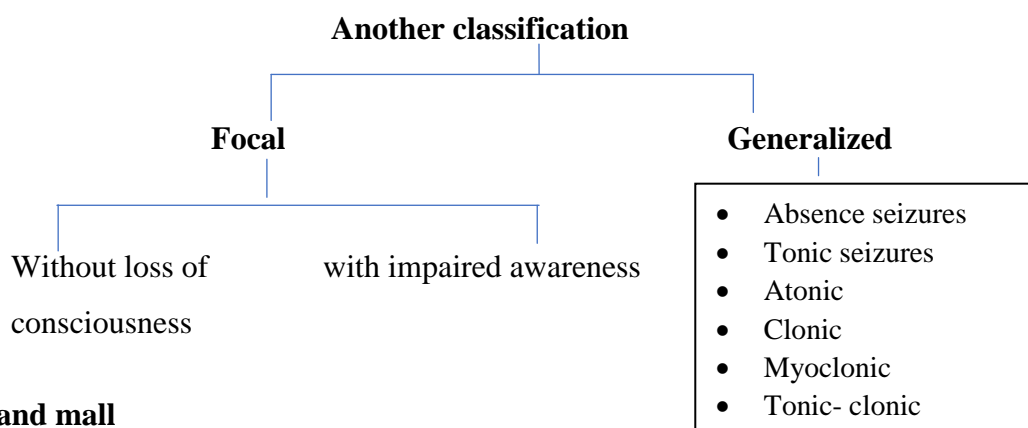
EPILEPSY

Definition: Occurrence of two unprovoked seizures Over a day apart beyond the neonatal period.

Patient with one unprovoked seizure and a high probability of further seizures in the next decade, similar to the recurrence risk over 60% following two unprovoked seizures are also termed as epilepsy.^[38]

Classification of Epilepsy





A] Grand mall

- These are tonic clonic seizures
- It is commonest type
- It has 4 phases.

1. Aura

- Onset of seizures
- Aura may be sensory, visceral, motor, autonomic
- It warns about impending attack of seizures

2. Tonic Phase

- Lasts for 30 seconds
- Laryngeal muscle spasm leads to shrill cry
- Contractions of skeletal muscles
- Patient becomes unconscious with frothing from mouth and fall on the ground
- Face looks pale
- Pupils looks dilated
- Eyes rolled either upwards or side
- Urine and stool pass involuntarily

3. Clonic phase

- Lasts for few minutes
- Characterized by alternating rhythmic contractions of muscle groups

4. Post ictal phase

- Confusion
- Headache

- Automatic actions
- EEG shows generalized burst of spike and irregular 4-6 Hertz spike wave complex.

B] Petit mall

- It is also known as absence seizures
- Duration – less than 30 seconds
- Characteristics- momentary loss of consciousness
- Age- 4 to 5 years (disappear after puberty)
- Sudden spell
- Fluttering of eye movements or rhythmic movements
- Multiple attacks in successive may occur
- Patient can do normal work after seizures
- 50 % cases of absence seizures may pass on to tonic-clonic seizures
- EEG shows 3 per second spikes

C] Jacksonian or Focal Seizures

- Starting from one part and spreading to other parts in a fixed pattern
- Unilateral twitching of the face and drooling
- Blinking of eyes, fluttering of eyelids, movement of tongue, pedaling or automatic movement due to subcortical neuronal discharge.
- Face, gums, tongue and inner side of cheeks may show parasthesia followed by one sided clonic movement or tonic posture.

D] Psychomotor

- These are partial complex seizures
- It is difficult to manage
- Visceral olfactory or visual aura followed by peculiar posture
- Tonic jerks of face of limbs or one-sided dystonia
- Lip smacking and chewing
- Impaired consciousness
- Postural tone decreases
- Behavioral abnormality- 3 times more common than other forms
- Headache, nausea, vomiting and epigastric pain

- EEG shows spike arising from temporal region indicates temporal lobe epilepsy.

E] Juvenile myoclonic Epilepsy

- Bilateral symmetric jerks of short duration
- Involves mainly arms and shoulders
- Started around puberty
- EEG shows bilateral multispikes and wave pattern

F] Atonic Akinetic seizures:

- Suddenly loss of Muscle tone in limbs, trunk and neck
- Consciousness lost and return after attack

ORGANIC OR SECONDARY EPILEPSY

Causes:1. **Post traumatic:** - Direct damage to the brain tissue following head injury.

5. Post-hemorrhagic.

- injury to the brain at birth or afterwards
- bleeding diathesis (tendency)
- patchy meningitis (inflammation of dura matter).

6. Post infection

- Meningitis
- Encephalitis
- Cerebral abscess

7. Post- Toxic

- Kernicterus
- Chronic poisoning of lead and arsenic

8. Degenerative

- Cerebral degeneration
- Intracranial neurofibromatosis

9. Congenital

- Arterio-venous aneurysm
- Cerebral aplasia

- Hydrocephalous

10. Parasitosis

- Ascariasis
- Toxoplasmosis

MANAGEMENT OF EPILEPSY

➤ Out of hospital

- Rectal diazepam
- Buccal midazolam or lorazepam
- Intranasal midazolam

➤ Hospitalized patients

- In active state of Epilepsy treat as a status epilepticus
- Mechanical ventilation if required in conditions like Glassgow coma scale score less than 8, Respiratory depression, fluid refractory shock, intracranial pressure raised, Difficulty in maintaining airway patency.
- **Drugs**
- Phenobarbitone- 3 to 8 mg /kg/ day IV OD/BD
- Phenytoin- 5 to 10 mg/kg/ day IV OD/BD
- Sodium Valproate – 20 to 60 mg/kg/ day IV OD/BD
- Carbamazepine- 10 to 30 mg/kg/ day IV OD/BD.

REFERENCES

1. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/3).
2. Sushruta Samhita, edited by Dr. Ambikadatta Shastri, Chaukhamba San- skrit Samsthan, Varanasi 7th edition, Part II (Uttaratantra 61/3).
3. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part I (Nidanasthana 8/11).
4. Shorvan SD, Farmer PJ. Epilepsy in developing countries: a review of epidemiological, socio cultural and treat- ment aspects. *Epilepsia*, 1988; 29 (Supl I): 536-54.
5. Jilek – All L, Jilek W, Miller JR. Clinical and genetic aspects of seizure disor- ders prevalent in isolated African population. *Epilepsia*, 1979; 20: 613-22.

6. Chiofalo N, Kirschbaum A, Fuentes A, Cordero M, Masesen J. Prevalence of Epilepsia in Melipilla, Chile Epilepsia, 1979; 20: 261-6.
7. Rwiza HT, Kilinzo GP, Haule J, et, al. Prevalence and incidence of epilepsy in Ulanga, a rural Tanzanian district : a community based study. Epilepsia, 1992; 33: 1051-6
8. Sridharan R, Murthy BN. Prevalence and pattern of Epilepsy in India. Epilepsia. 1999; 40(5): 631-8.
9. Leonardi M, Ustun TB. The Global burden of Epilepsy. Epilepsia, 2002; 43(suppl 6): 21-5.
10. Pahi K, de Boer K. Epilepsy and rights. In: World Health Organization. Atlas: Epilepsy care in the world 2005, illustrated edition. Geneva, Switzerland : WHO Publication, 2005. PP. 72-3.
11. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/3).
12. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/4,5).
13. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/5).
14. Sushruta Samhita, edited by Dr. Ambikadatta Shastri, Chaukhamba Sanskrit Samsthan, Varanasi 7th edition, Part II (Uttaratantra 61/4-6).
15. Astanga Hrudaya commentary by Dr. Gopal Krushna Gadre, Shri Gajanan Book Depot, Mumbai, 7th edition (Uttaratantra 7/1-2).
16. Madhavnidanam edited by Prof. Yadunandana Upadhyaya, Chaukhamba Sanskrit Sansthan, Varanasi, 26th edition, Purvardha (Apsmara nidanam).
17. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/6,7).
18. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/8).
19. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/9).
20. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/10).
21. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/11).

22. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/12).
23. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/14).
24. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/15).
25. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/16).
26. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/17).
27. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/18,19,20,21,22,23,24).
28. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/25).
29. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/26).
30. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/27).
31. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/28).
32. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/29).
33. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/30).
34. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/31).
35. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/32,33,34,35,36).
36. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/37,38).
37. Charak Samhita of Agnivesha by Vd. Sataynarayan Shastri – Chaukhamba Bharati Academy, 22nd edition Part II (Chikitsasthan 10/39).

38. Vinod K Paul, Arvind Bagga, editors, Ghai Essential Paediatrics 2019, 9th Edition, Diseases of Central Nervous system. CBS Publishers and Distributors, New Delhi. page no 555.
39. Mukesh Agrawal, editor. Textbook of Paediatrics, second edition, Seizure Disorders, CBS Publishers and Distributors, New Delhi. page no 876.