Ancient Science of Life, Vol No. VI No. 3 January 1987, Pages 138 - 147

STUDY OF DOSHIC INVOLVEMENT IN APASMARA (EPILEPSY) AND ITS UTILITY

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Received: 06 January 1986 **Accepted: 28 August, 1986**

ABSTRACT: *68 cases of epilepsy are studied here for assessing the doshic dominance to understand prognosis with a view to supplement the treatment with some doshahara compounds or drugs. Most of the cases studied or vata or pitta dominant cases, thereby, requiring vatahara or pittahara treatment.*

INTRODUCTION

Epilepsy is a Greek word meaning "a condition of being overcome or seized or attacked". In ancient times, (this applied to) the Supernatural or demonic forces were thought to be responsible for the seizures. Presently in modern medicine, epilepsy is considered to be a chronic brain syndrome of various aetiology characterized by recurrent seizures due to excessive discharges of cerebral neurons and associated with a variety of clinical and laboratory manifestations[1].

Apasmara (Epilepsy) is known in Ayurveda from the earliest time. Unlike the allopathic term "epilepsy", the word "apasmara" indicates only a clinical sign and not a supernatural cause. Smara means memory. It includes memory, intelligence and consciousness. Apa means loss. Loss of consciousness is one of the important signs[2]. Mada and murcha also have the same sign but without convulsion[3]. In unmade, there is only impairment of buddhi not a loss of it[4]. Akshepa is a vatic disease characterized with convulsion. The same may be present in apasmara but there is no loss of consciousness with froth in akshepa. The clinical picture of apasmara presented in ayurveda and that of epilepsy in modern medicine is almost identical.

The clinical symptoms as per modern medicine are disturbance of consciousness movement or sensation. In the laboratory EEG shows hypersynchronisation of the electrical activity of the brain. Formerly epilepsy is described as either idiopathic or symptomatic. Idiopathic implies that the cause of the disorder is unkonw and that the seizures are the main symptom. Symptomatic epilepsy is due to some demonstrable brain disease. However, the latest classification approved by W. H. O. is as follows. Epilepsy is classified into two main groups.

a. generalized epilepsy

b. partial epilepsy

Generalized epilepsy consists of two sub-groups. Primary generalized epilepsy without any sign of organic brain disorder and secondary generalized epilepsy caused by a demonstrable or at least presumptive organic brain disease[5].

The general signs according to ayurveda are tamapravesa (loss of consciousness) and bheebatsa chesta (convulsion). The attack is precipitated by kama (passion), krodha (anger), lobha (greed), moha (temptation), harsha (gratification), soka (grief) chinta (worry) udvega (anxiety) etc.[6] We get the clear doshic picture of loss of consciousness under mada and murcha. According to Ayurveda, aura appears in murcha also. Losing consciousness quickly after seeing blue black or red colour and quickly recovering are vatic signs; losing the same after seeing light or dark red or yellow colours and recovering with excessive sweating are paithic signs. Losing the same slowly after seeing cloudy sky and recovering late are kapha signs of murcha[7]. Though loss of consciousness is described in terms of doshic influence, pitta is the most important dosha in all varieties of murcha[8]. When this cardinal sign is to be studied under apasmara, the same description is to be borne in mind. Apasmara is somewhat curable if it is a fresh case and caused by a single dosha. The disease caused by all the doshas particularly of a weak person with frequent attacks involving the movement of eye lid is difficult to be cured[9].

Apasmara is to be treated applying samsodhana and samsamanakriyas[10]. Without doshopakrama, prescribing anticonvulsive drug will have only a palliative effect.

Three successive commissions on anti epileptic drugs at the international League Against Epilepsy (ILAE) have played an important role stimulating research and disseminating information. Significant advances have been made in the diagnosis and treatment of Epilepsy in the past decade. Dr. Robert Cany observes, “in all sceinces, as the body of knowledge grows, specialisation becomes inevitable. A point is reached suddenly when the interests of various workers in a science diverge. When each worker pursues his own line of enquiry dropping as he goes a curtain of new techniques and a new knowledge between himself and his former collegaues”[11]. “It is very obvious that a beginner wherever his specialisation of studies may lead him, must acquire and retain a knowledge of the fundamental integrated activities of the body as a whole”[12]. When modern outlook is analytical, ancient ayurversists are always aiming on synthesis of the apparaently divergent factors of life. The development of the concept of doshas in describing physiological function, pathological abnormalities and therapeutic effect of the drug is only indicative of the above spirit.

A large number of patients receive modern anti-epileptic drugs for years together. Though absence of any seizures for two consecutive years during the treatment is considered as cure for gradual withdrawl of the drug, still many continue the drug for years together. The cure rate is not satisfactory. After one year of treatment, the future course of the seizures in adults will in the majority of the cases be predictable13. A lot of information regading seizures, seizure pattern, aura etc., recorded in the case sheet have been compiled and published. A lot of data are still avaialble in the wards. If these data are interpreted in terms of ayurvedic concept, some new light on the cure rate and prognosis of the diseases may be thrown. It may help in supplementing the modern drugs with the ayurvedic drugs. The treatment can be

adopted on the dosha basis and better results can be achieved. Keeping this in view, the present study is undertaken. A proforma was prepared to enter the sailent features observed during the study for interpreting them in terms of doshic concept of ayurveda.

METHODS AND MATERIALS

The case records of epilepsy patients treated at the Neuro Surgery Department of Voluntary Health Services Medical Centre form the materials of this study. The case records of epileptic patients exhibiting grandmal or major epilepsy, treated and followed – up for a minimum of 2 consecutive years are scrutinized. From the available records, 70 cases conforming with the above criteria are selected randomly and they form the subject of this study. Of the 70 cases comprising 56 adults and 14 children, 47 are males and 23 are females. The age range of patients is 3 to 60 years. Other details regarding socio – economic status viz. education, occupation, income, etc. are recorded. Information pertaining to history of illness, precipitating factors, prodroma, aura, ictus post – ictal, treatment given and periodical follow-ups throwing light on 1. Frequency of attack and severity. 2. Regularity of drug intake 3. Progress made, is recorded in the proforma (Vide Annexure – 1).

GENERAL OBSERVATIONS

Duration of illness ranges from 1 month to 35 years. 46 cases had their first onset of seizure below 3 years; 12 cases between 4 and 7 years; 4 cases between 8 and 11 years; 6 cases between 12 and 15 years and 2 cases above 16 years.

The maximum number of attack in 24 hours observed show that 45 patients suffer generally 1 – 3 attacks; 5 patients 4 – 6 attacks; 4 patients 7 – 10 attacks and 2 having more than 11 attacks. 11 cases have reported cluster attacks.

The information obtained regarding the relationship between the attack and time general reveals that 25 patients get their attacks mostly while awake; 23 while asleep and 19 both awake and asleep and hence variable. Some important factors which are supposed to precipitate the attacks according to the patients are presented in the form of a table given below.

S. No.	Precipitating factors	No. of cases
1	Emotional factos (anger, fear, frustration, worry, weeping)	27
2	Fatigue	15
3	Sleep	9
4	Lunar cycle	9
5	Lack of sleep	8
6	Oil bath	6
7	Food	6

8	Menstruation	4
9	Starvation	4
10	Fever	3
11	Others (noise, touch, alcohol, excessive reading or writing, sexual intercourse, etc)	

Most of the subjects are not observed to have experienced significant prodromal sign. However, prodromal signs like pallor, puffiness of face, mood changes, irritability, headaches etc. have been mentioned by some of the patients.

27 out of 70 cases could distinctly describe subjective sensations, preceding an attack of epilepsy. The various pre – monitory factors enumerated are given in the form of a table below:

S. No.	Aura	No. of cases
1	Blurred vision	14
2	Vertigo	7
3	Tinnitus	6
4	Automation	3
5	Adversive movement of the head	2
6	Vague, indescribable feeling	2
7	Giddiness	2
8	Visual hallucination, fear (not of an attack) palpitation, Oscillopsia, dysphasia, etc)	10

The ictal phase constituting toniclonic, convulsions followed by loss of consciousness is reported by the patients.

The other characteristic features of the attack are tabulated below.

S. No.	Features	No. of cases
1	Frothing	45
2	Epileptic cry	32
3	Incontinence of urine	27

4	Tongue – bite	26
5	Injury	19
6	Excessive salivation	8
7	Incontinence of motion	7
8	Stertorous cry	2
9	Adversive movements of the head	2
10	Vomiting	1

S. No.	Post – ictal Symptoms	No. of cases
1	Weariness	55
2	Sleep	46
3	Headache	39
4	Amnesia	26
5	Muscular pains	19
6	Mood changes	17
7	Anorexia	12
8	Confusion	12
9	Automation	6
10	Vomiting	6

RESULTS AND DISCUSSIONS

Of the 68 cases studies, 62 cases show vatic dominance (92.18%), 4 cases show paitic dominance (5.88%) and 2 cases show V = P dominance (2.22%)

It can be seen from Table 1 that, out of 62 cases, with dominance of vata dosha, 11 cases (17.74%) had good response: 49 cases (79.03 %) moderate response and 2 cases (3.23%) poor response. Out of 11 cases showing good response, 8 cases (72, 72%) have the second component of doshic pattern less than half of the first component and 3 cases (27.28%) have the second component of doshic pattern more than half of the first component ($P < 0.05$).

Out of 49 cases, showing moderate response, 30 cases (61. 22%) have the second component less than half of the first component while 19 cases (38.78%) have the same more than half of the first component. The difference between the two proportions is not significant. The 2 cases (3.23%) showing poor response, have the second component more than half of the first component.

It can be seen from Table II that out of 4 cases of pitta dominance 1 shows good response; 3 moderate response and nil under poor response. The one showing good response has the second component more than half of the first component. 3 cases under moderate response also have the second component more than half of the first component.

It can be seen from Table II that out of 4 cases of pitta dominance 1 shows good response; 3 moderate response and nil under poor response. The one showing good response has the second component more than half of the first component. 3 cases under moderate response also have the second component more than half of the first component.

It can be seen from Table III that, out of 2 cases showing moderate response and having vata and pitta in equal dominance, I case has the second components less than half and the other more than half of the first component.

Table IV shows that out of 68 cases, 44 cases had their first attack in Kapha age and 24 in pitta age. 0 – 5 age group has 10 cases with vatic dominance, of which 7 cases (70%) show moderate response and 3 cases (30%) show good response. There are 2 cases with good response in which the second component is less that half of the first component. The third good response case has the second component more than half of the first component. In this age group, there is no pitta or kapha dominance case.

In 6 – 20 years age group, there are 37 cases, 34 with vata dominance and 3 with pitta dominance. Of the 34 vata dominance case, 5 cases show good response and 25 moderate response. Of the 5 cases, 3 cases have the second component less than half and 2 more than half of the first component. 3 cases showing moderate response with pitta dominance, have their second component more than half of the first component. In 21 – 40 years age group, there are 21 cases with vata dominance and 1 case with pitta dominance. Of the 21 cases, 3 cases showing good response have their second component less than half of the first component and of the 17 cases showing moderate response, 11 have their second component less than half and 6 have more than half of the first component. 1 case with poor response with vata dominance has the second component more than half of the first component.

TABLE – I
Vata Dominance

S. No.	Response	No. of cases	%	II component less than 50% of I component	II component more than 50% of I component
1	Good	11	17.74%	8 (72.72%)	3 (27.28%)
2	Moderate	49	79.03%	30 (61.22%)	19 (38.78%)
3	Poor	2	3.23%	-	2 (100 %)

TABLE – II
Pitta Dominance

S. No.	Response	No. of cases	%	II component less than 50% of I component	II component more than 50% of I component
1	Good	1	25%	- -	1 (100%)
2	Moderate	3	75%	- -	3 (100%)
3	Poor	-	-	- -	- -

TABLE – III
Vata pitta Dominance

S. No.	Response	No. of cases	%	II component less than 50% of I component	II component more than 50% of I component
1	Good	-	-	- -	- -
2	Moderate	2	100%	1 50%	1 50%
3	Poor	-	-	- -	- -

TABLE IV
Relationship among the age of onset, Doshic dominance and Response to treatment

Age Group	Total No. of cases	Vata dominance									Pitta dominance									Kapha
		Good			Moderate			Poor			Good			Moderate			Poor			
		No	<50%	>50%	No	<50%	>50%	No	<50%	>50%	No	<50%	>50%	No	<50%	>50%	No	<50%	>50%	
0 – 5 yrs	10	3	2	1	7	4	3	-	-	-	-	-	-	-	-	-	-	-	-	Nil
6 – 20 yrs	34	5	3	2	25	15	10	1	-	1	-	-	-	3	-	3	-	-	-	Nil
21 – 40 yrs	22	3	3	-	17	11	6	1	-	1	-	-	-	1	-	1	-	-	-	Nil
41 – 60 yrs	2	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	Nil

TABLE V
Relationship between the doshic time of attack and Response to treatment

S. No.	Doshic time of attack	No. of cases D D	Responded			Not Responded		
			No.	<50%	>50%	No.	<50%	>50%
1	Pitta	7 (36.84%) VPK – 5 VP = K1 V = PK – 1	7 (100 %)	2 (28.58%)	5 (71.42%)	0	-	-
2	Pitta Vata	4 (21.05%) VPK – 2 VP = K – 1 PVK – 1	4 (100 %)	2 (50%)	2 (50%)	-	-	-

3	Kapha	2 (10.53%) VKP – 1	2 (100 %)	2 (100 %)	-	-	-	-
4	Kapha Pitta	4 (21.05%) VKP – 2	4 (100 %)	3 (75%)	1 (25 %)	-	-	-
5	Vata	2 (10.53%) VPK – 1 PVK - 1	2 (100 %)	1 (50%)	1 (50%)	-	-	-

In 41 – 60 years age group, there is no case with kapha dominance as well as pitta dominance. Of the 2 cases with vata dominance, 1 showing good response has the second component more than half of the first component and the other showing moderate response has the second component less than half of the first component.

It can be observed from Table V that 7 cases have their attacks generally in the pitta kala ; 4 in pitta – vata kala ; 2 in kapha kala; 4 in kapha pitta kala; and 2 in vata kala. All the 7 cases having their attacks in the pitta kala have responded well to the treatment out of which 2 have their 2nd component less than the half and 5 more than half of the 1st component. All the 4 cases having their attacks in pittavata kala also have shown good response, out of which 2 have their second component less than half and 2 more than half of the first component.

Similarly, the 2 cases getting their attacks in kapha kala, have responded well and both have their 2nd component less than half of the 1st component. 4 cases having their attacks in kaphapitta kala have also shown a good response of which 3 have their 2nd component less than and I more than half of the 1st component. Finally, the 2 cases getting their attacks in vata kala, responded well to the treatment of which 1 has the 2nd component less than and another more than half of the 1st component.

According to Ayurveda, the following ten factors are to be considered for initiating an ideal treatment. The ten factors are doshas, dushyas (site or tissue afflicted) bala (severity of illness and power of the resistance of the patient) kala (season as well as time of the day) anala (digestive capacity) prakriti (constitution and temperament) vayas (age) satwas (mental make-up) satmya (habit) and ahara (diet) [14]. Since the drugs are described in terms of their dosahara properties, the dominant doshas in the disease are to be understood for proper selection of the drug.

Bheebatsa cheshta (convulsion) and tama; pravesha are the two cardinal signs of apasmara[15]. Vatic and or paithic dominance may be common. Convulsion (akshepa) is a vatic sign and loss of consciousness (murcha or tama; pravesha) a paitihic one. While describing prognosis of apasmara, it is stated that if the disease is fresh and caused by single dosha, the prognosis is good. In other words, old cases with more than one dominant dosha particularly sannipatajas are difficult to cure. The disease in a weak person with convulsions particularly involving eye brows also is difficult to cure[16].

In every disease, all the 3 doshas will be present in different degrees. In order to find out whether a disease has got dominance of single dosha, it is decided to consider the values of the second component in the doshic pattern. If the values are less than half of the values of the first component, it will be constructed that the pattern has got the dominance of single dosha; if more than half, the dominance of more than one dosha will be constructed.

In the present study, out of 68 cases, 62 show vatic dominance, 4 cases show paithic dominance and 2 cases have vatic and paithic values equal, 11 cases (17.74%) show good response. 49 cases (79.03%) show moderate response and 2 cases (3.23%) poor response. Of the 11 cases showing good response, 8 cases have

dominance of single dosha as explained above i.e values of the second component are less than half of the values of the first component. The remaining 3 cases have dominance of more than one dosha. The difference in the two proportions is significant ($P < 0.05$) in the good response cases.

Out of 49 cases, showing moderate response, 30 cases (61.22%) have the dominance of single dosha (the value of the second component being less than half of the first). The remaining 19 cases (38.78%) have the dominance of more than 1 dosha. However, the difference in the two proportions is not significant. The 2 cases showing poor response have the dominance of more than 1 dosha.

In pitta dominant cases, all the 4 cases have responded. All of them have more than 1 dosha dominance. There is no case with poor response. There is no case with kapha dominant doshic pattern. It is clear from the above, that though vata and pitta are the (principal) doshas, vatic dominant cases respond better than vata and pitta dominant cases while pitta dominant cases as well as pitta and vata dominant cases respond alike.

It is seen that out of 68 cases, 44 cases had their first attack in kapha age. Vatic and paithic dominant disease first manifesting at kapha age is a favourable sign. All the 10 cases in the 0 – 5 age group have responded. The prognosis of such cases is considered better in modern medicine also[17]. There is no pitta or kapha dominant or case in this age, 24 cases having their first attack in pitta age have moderate prognosis. In 41 – 60 years age group, there is no kapha dominance or pitta dominance case. First phase, middle phase and last phase of life span are associated with kapha, pitta and vata respectively[18]. If the dosha associated with age and dominant dosha in the disease are dissimilar, the severity of the disease will be less. Since majority of cases of our study have their attack in kapha age, the prognosis is good. Similarly, in Ayurveda the time of attack is important. Knowledge of it also will help prognosis. Day and night are divided into three parts, the first, middle and last are associated with kapha, pitta and vata respectively[19]. Two vata dominant and 5 vata pitta dominant responded cases had the attack in pitta time; 2 pitta cases and 2 pitta vata dominant responded cases in pitta as well as vata time. Since most of the vatic cases had their attack in nonvatic time, the cases studied have good prognosis.

Similarly, vata or vata pitta dominant cases also responded in kapha or vata time. There is not case which did not respond.

In some cases, there is an association of lunar phase in precipitating that attack. Of late, the association of the moon on certain disease processes is engaging the attention of some scientists. Moon is associated with mind in oriental thinking[20]. Any extreme in moon-movement is considered to have some influence on psychic condition of the patient. In Bhutavidya akin to psychiatry, certain possessed like conditions are associated with new moon or full moon[21]. The doshic influence and response rate of these cases do not show any abnormality. If at all it indicates anything, it is only the influence of kapha associated with waxing moon in cases having precipitation during the full moon and absence of it during the new moon.

Epilepsy was once considered as a constitutional disease. This view was subsequently discarded[22]. However, some genetic predisposition is recognized particularly childhood onset epilepsy[23]. According to Ayurveda, beeja bhaga or

beeja bhaga avyava affected by the doshas in the beeja many cause adibalapravrutha disease[24]. Similarly, disease proneness due to prakriti is possible for any disease.

About 30% of the patients with epilepsy do not respond well to allopathic drugs and the reasons are not clear. Though allopathy has ruled out any correlation of the disease with individual constitution and temperament, it is felt that it may have something to do with prakriti or constitutional factors. It is desirable to study the prakriti of all patients with epilepsy who attend the neurology clinic and correlate the type of prakriti with 1. The nature and type of epilepsy (granmal, temporal loble epilepsy, focal or petitmal) 2. Duration and severity patterns 3. Response to drugs 4. E. E. G findings and in general physical and biochemical data.

Once a correlation become obvious, it may be possible to predict the outcome of treatment. More important, it may be possible to add additional therapy according to Ayurvedic science, appropriate to the prakriti of the patients thus achieving control of the diseases in intractable cases. With the knowledge gained about the relation of prakriti to epilepsy, it may be possible to reduce the drug intake of patients after suitable advice on additional Ayurvedic drug and diet[25].

Since the present study limits itself to the study of doshic condition, the outcome is interpreted on doshic line alone. Most of the cases studied are of vatic or paithic dominance. Kapha dominant cases may be more serious. While general prognosis is comparatively better, the cases with dominance of single dosha i.e. vata dominant or pitta dominant cases (values of second component being less than half) have still better prognosis to Ayurveda. But the response being moderate in such cases also, the treatment requires some modification. If more vatahara and pittahara measures, are included, the response may be better. Since most of anti-epileptic drugs are metabolized in liver[26], some pittahara measures are necessary particularly the liver being the important pittasthana. Katahara compounds like Balarishta[27], Aswagandharishta[28], Avarthitha ksheerabala[29], etc., and pittahara compounds like Arogyavardhini[30], vati, kushmanda avaleha[31], Mahakalyana gritham[32], Matulingarasayana[33] can be considered alongwith any anti-convulsive drugs. Among the single drugs Bala (Sida Cordifolia, Linn)[34], Aswagandha (withania somnifera, Dunal)[35], Yashti (Glycyrrhiza Glabra, Linn)[36] all vataharas, Katuki (Picrorrhiza kurrooa, Benth)[36] pittahara may be considered for supplementing the standard therapy. Anticonvulsive drugs like Jatamamsi (Nardostachys Jatamamsi, DC) Sankhapushpi (Convovulus pluricaulis Chois) etc also can be used with certain advantage[37].

ACKNOWLEDGEMNTS:

The authors express their thanks to Prof. B. Ramamurthy, Director, Institute of Neurology and to Dr. M. V. Chari of ALURIM, for providing necessary guidance and help to complete this study.

Annexure I – Proforma

S. No.		Neurology No.
Name	Age:	Sex:
Date of registration:		Income:
Education	:	Occupation:

History of present illness

Age at ondset

Total duration of symptom

General frequency

Maximum number of attacks per day

Interval between attacks – Maximum

Minimum

Change of frequency

Time of attack

Precipitating Factors
Prodroma, Aura, Ictus

Tonic, clonic convulsions

Loss of consciousness

Frothing / Tongue bite / epileptic cry / Injury / Salivation / incontinence of urine / motion / others

Post ictal

Sleep / weariness / Head ache / anorexia / amnesia / automatism / others

Response to treatment

Clinical impression : Good / Moderate / Poor

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