



## Etiology and Symptoms of Epilepsy from the Perspective of Traditional Persian Medicine Scientists

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Received: 12 Feb 2018

Revised: 7 Apr 2018

Accepted: 15 Apr 2018

### Abstract

Epilepsy is a relatively common neurological disease classified as a chronic disease in modern medicine. Different treatments have been suggested for this disease, but they have failed in complete treatment of some types of epilepsy. Since Traditional Persian Medicine is one of the medical schools with special perspectives on epilepsy, we aimed to review the etiology and symptoms of epilepsy from the perspective of Dr. Ahmadih, the contemporary physician, and some well-known traditional medicine practitioners [hakims] in order to obtain a new pattern in recognition and classification of epilepsy. Valid texts of traditional medicine in different historical periods including: The Canon of Medicine (Avicenna, 980-1037AD), Sharhe Asbab va Alamat (Nafis ibn Avaz Kermani), Zakhireye Kharazmshahi (Jorjani), Exire Aazam (Nazem Jahan), Moalejate Aghili (Aghili Alavai Khorasani Shirazi), Kholasat al-Hekma (Aghili Alavai Khorasani Shirazi), Tebe Akbari (Shah Arzani Dehlavi) and Mizan Al-Teb (Hakim Arzani) with focus on opinions of Dr. Ahmadih (Abdollah Ahmadih), were investigated. Relevant issues to epilepsy and its etiology and symptoms were reviewed and the common points and differences of various perspectives were gathered. According to traditional practitioners, epilepsy is a partial obstruction occurred in brain paths and ventricles preventing organs to perform their natural function. Familiarity with perspectives of traditional medicine from etiology and symptoms of epilepsy would help to suggest a new and practical classification of the disease. Thus, it seems that attention to these perspectives could provide a new approach for prevention, diagnosis and treatment of epilepsy.

**Keywords:** Traditional Persian Medicine, Epilepsy, Preventive Medicine

**Citation:** Tajadini H, Akhtari E, Seifadini R, Khazanehha M. Etiology and Symptoms of Epilepsy from the Perspective of Traditional Persian Medicine Scientists. Trad Integr Med 2018; 3(2): 84-90.

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## Introduction

Epilepsy is a relatively common neurological disease [1] and following stroke is one of the most common neurodegenerative diseases. This disease has affected more than 50 million persons around the world [2]. The mortality rate in children with epilepsy is 2-3 times more than that in unaffected population [3]. In this disease, abnormal electric discharge in a group of brain neurons causes repeated seizures [4]. In spite of great progress in medicine, the negative meaning associated with the word “epilepsy” affects the patient more than the disease, itself, or the adverse effects of the antiepileptic drugs [5]. Since these kind of diseases are chronic, long-term consumption of chemical medicines, especially conventional drugs, is associated with significant side effects. Moreover, approximately 20-30% of patients with epilepsy are resistant against medical treatment [6-8].

Considering the global attention to complementary medicine, care in applying diagnostic and therapeutic methods in complementary medicine including Traditional Persian Medicine is a necessity [9].

In Traditional Persian Medicine, diseases are investigated based on four humors [10,11] and since treatment is based on removing the cause of disease, major causes of disease are paid special attention [12]. The aim of the present study was to investigate the etiology and symptoms of epilepsy based on the perspectives of ancient physicians with a focus on perspectives of Dr. Abdollah Ahmadiéh, an Iranian contemporary scientist who was familiar with old texts and was continuously busy with adopting old and

modern medicines.

It seems that understanding and attention to strategies and opinions mentioned in Traditional Persian Medicine can solve treatment problems and led to the development of new fields of research related to the diagnosis and treatment of epilepsy.

## Methods

We reviewed several sources of Iranian Traditional Medicine from different centuries including The Canon of Medicine (Avicenna, 980-1037AD), Sharhe Asbab va Alamat (Nafis ibn Avaz Kermani), Zakhireye Kharazmshahi (Jorjani), Exire Aazam (Nazem Jahan), Moalejate Aghili (Aghili Alavai Khorasani Shirazi), Kholasat al-Hekma (Aghili Alavai Khorasani Shirazi), Tebe Akbari (Shah Arzani Dehlavi) and Mizan Al-Teb (Hakim Arzani) with focus on opinions of Dr. Ahmadiéh (Abdollah Ahmadiéh) spread in his book named “The secret of Treatment”. The reason of emphasizing on Dr. Ahmadiéh opinions was his familiarity with both old and modern medicine.

All related issues to epilepsy in the mentioned books were recorded and analyzed in terms of etiology and symptoms. It should be mentioned that in Persian medicine texts, epilepsy is discussed under the topic of “head disorders”.

## Results

### *Definition of epilepsy*

The word “epilepsy” means “to fall” [13-15]. According to physicians’ expression, it is a partial obstruction in brain paths and ventricles that

prevents organs of nervous system to do their normal functions [16].

### *Etiology*

According to the traditional medicine sages, partial obstruction [stenosis] in brain ventricles and neurotic pathways is the major cause of epilepsy. Although, epilepsy is related to the anterior section of brain, due to proximity with other parts, they are affected too [17-20].

There are three known causes of seizure in Traditional Persian Medicine

- 1- humors overload of the brain
- 2- Dryness
- 3- Constriction [13]

Jorjani in “Zakhireye Kharazmshahi” and Dr. Ahmadiéh in the “Secrets of treatment” have said that brain suffers from vapor and undesirable substances, so that it constricts and irregular movements in the form of seizure occur; just like stomach when it constricts to remove the undigested spoiled food and as a result hiccup and nausea occurs. For this reason, brain epilepsy has been linked to hiccup. It should be mentioned that sneezing is small epilepsy and epilepsy is a great sneezing with the difference that sneezing causes head lightness and happens through nasal cavity and face muscles and, due to its strong power, the delicate and little substance is discharged immediately. But, in epilepsy, due to the large amount of substance and weak power, several organs are involved [17, 19].

The above mentioned causes, except dryness, can be considered as epilepsy causes, because epilepsy attacks happen suddenly while seizure

resulted from constipation happens gradually and if dryness is as severe as causing seizure, death occurs prior to it [14, 19].

### *Individuals who are susceptible to epilepsy*

- Children and those with overeating and dyspepsia
- Residents of regions with too south winds

### *Clinical symptoms of epilepsy*

Common clinical symptoms in all types of epilepsy are as follows:

- 1- Tongue discoloration to yellow on superior part and green on posterior part
- 2- Coolness and heaviness in anger and sadness
- 3- Head heavy during attacks
- 4- Too much nightmares
- 5- Forgetfulness
- 6- Illogical fear of everything and every noise
- 7- Impatience and restlessness
- 8- Negative thoughts like melancholy
- 9- Taking small jobs too heavy and becoming furious without reason [12,17,19]

### *Types of epilepsy and clinical symptoms*

Epilepsy has been classified in traditional medicine into three categories:

- 1- Originated from brain itself
- 2- Originated from other organs and then affected the brain
- 3- Epilepsy due to insect sting or brain potency [13,14]

According to Jorjani [*Zakhireye Kharazmshahi*], epilepsy, in whole, is related to brain, even though it is originated from another organ and suffering substance comes from another organ to the

brain. Moreover, epilepsy is related to the anterior segment of brain, but due to the proximity, other parts are affected too [19].

1- Epilepsy that originated from brain itself [13,14,20,21]: In this type, the patient feels like head heaviness and his sense is milder and weaker than the past. The patient suffers from dizziness and the symptoms exist even with empty stomach. This type of epilepsy has five causes:

1.1. The obtrusive annoying substance is phlegm [*balgham*]. It is the most common cause of epilepsy and its symptoms are poor sense, head heaviness, too much saliva, feebleness, pale color, cold *Mizaj* [temperament], slow motions and the exit of too much foaming at the mouth”

1.2. The annoying substance is black bile [soda]. The symptoms are the same as heart spasm and asphyxia. The patient mouth becomes sour and if he/she throws his saliva on sand, it bubbles due to saliva acidity. Negative thoughts, severe compulsion, slimness and increased appetite [13].

1.3. The annoying substance is yellow bile [*safra*]. In itself, it is rarely the major cause of epilepsy, because bile [*safra*] is delicate and thin, while brain spaces are large; so that, it should be in great amount or mixed with blood [*dam*], phlegm [*balgham*] or Soda (black bile). Its symptoms are thinking disorder, yellow eye and vomit. It should be mentioned that convulsion is not clear in this type, due to the tenuity of bile [*safra*]

1.4. The annoying substance is blood [*dam*]. Therefore, it is rare and it is in combination with phlegm [*balgham*] or black bile [soda] in the majority of time. Symptoms are blood overload in the head and as a result, temporal veins are full and also the patient has a red face. These symptoms are significantly seen during seizure attack and sometimes are accompanied with nose bleeding. Sometimes, the patient complains from different pains in head or empty stomach prior to the attack [13,14,21].

1.5. The substance is combination of all humors and symptoms are a collection of the mentioned symptoms [20].

2- Epilepsy that originated from other organs: It occurs with participation of all body organs or a single organ like stomach, liver, spleen, intestine, uterine, *vesiculae seminalis*, hand and foot. Based on the involved organ, types of epilepsy emerges as follows:

#### 2.1. *Gastric epilepsy* [13,17,20,21]

Its origin is stomach. Whenever the stomach is filled with negative humors of, bad vapor is produced and since the brain is sensitive, as a result, it constricts and convulsion occurs. It is important to mention that if the substance is healthy or the brain sense is not strong, convulsion will not happen. Thick unhealthy substance in great amount causes thick and unhealthy vapors in stomach leading to obstruction in brain and brain paths [13,21].

*Symptoms:* Lightness feeling after vomiting,

gastric bloating, belching and gurgling are signs of gastric problems.

The symptoms of the presence of *soda* humor in stomach are severe appetite, compulsory thoughts and sour belching. *Safra* humor is associated with heartburn and thirst.

When gastric epilepsy is due to excess of humors, it occurs following dyspepsia and in this case, a severe pain between the two shoulders is felt that is not relieved until food digestion. Gastric pain after food digestion is related to dry temperament [*Mizaj*].

Gastric pain with empty stomach shows that epilepsy is due to smutchy humor but not great amount of humor, because spoiled humor empties the stomach and causes gastric pain and in this case by eating good food, epilepsy is relieved [19].

### 2.2. Hypochondrial epilepsy [13,21]

The cause is the presence of problem in a part of peritoneum and its symptoms are sour belching, abdomen distension, peritoneal irritation and vomiting undigested food [13,21].

### 2.3. Spleen epilepsy [13,14,21]

It occurs due to the accumulation of thick humor in the spleen and reaching to the brain. Spleen bloating, hardness and pain are the symptoms [13,14,21].

### 2.4. Hysterical epilepsy [13,21]

Its cause is accumulation of semen or menstrual blood leading to their transformation to annoying substances and vapors moving toward the brain. Intercourse quit and amenorrhea as-

sociated with pain and heavy feeling in thigh, genital organ, kidney region and back are the symptoms [13,17,21].

### 2.5. Liver epilepsy [13,14]

It is originated from the liver and its symptoms depend on the liver state. In the case of hot liver, the patient has hot symptoms and cold liver causes cold symptoms. These symptoms have been completely presented in traditional medicine texts under liver discussion [13,14].

### 2.6. Intestinal epilepsy [13,14]

In most of the cases it is due to the presence of worms in the intestine causing thick infected smutchy vapors moving toward the brain [13,14].

### 2.7. Limbic epilepsy [13,14,19].

Jorjani in “Zakhireye Kharazmshahi” has addressed this type of epilepsy as vapor epilepsy. It is originated from hand, foot or leg and gas moves toward the brain and seizure occurs. The reason of gas production in these organs is sticking of substance in the vessels of these organs. As a result, pneuma zoticon cannot reach that place and consequently the substance and blood that are in these vessels are cooled and the gas is produced. This coldness reaches to the brain and causes thickening of dampness in brain ventricles. Following this, passages of vital spirit are narrowed and seizure occurs. Symptom is feeling of the movement of cold gas from that site to the brain [like ant movement] associated with symptoms such as eyes dilation and watering, darkened skin, fingers and toes

bending and stretch feeling in hands and feet during the attack. At the same time, symptoms such as yawn, oral valley and urination are also probable [13-15,19].

### 3. Epilepsy caused due to insects bite and brain potency

#### 3.1. Sting epilepsy [13,14,15]

Following insects' bites, poison moves from the skin toward the nerve and the poison reaches the brain and causes seizure [13,14,15].

#### 3.2. Brain potency [13,14,15].

In this type, potent brain sense is the cause of seizure. In other words, the person immediately feels bad qualities which is bothering and results in seizure.

### Miscellaneous types of seizure

#### *Ablimia epilepsy* [13,21]

In this type, the patient has no sensation and no movement and also it is the most fatal type of epilepsy. The cause is complete filling of all brain ventricles with thick humors causing a condition similar to stroke. Its substance is soda [*Black bile*] or *balgham* [*Phlegm*] humor and its symptom is convulsion in all body organs which differs from the other mentioned types [13,21].

#### *Infantile epilepsy* [13,14,21]

The cause of disease is brain moisture.

This type of epilepsy occurs in children following fever and hotness and for this, it has been classified under *safra* (*yellow bil*) epilepsy [13, 14, 21].

## Conclusion

Approximately 20-30% of patients with epilepsy are resistant against medical drug [6-8]. Considering public attention to Traditional medicine, diagnostic and therapeutic methods would be applied in complementary medicine. Therefore, Traditional Persian Medicine is taken into consideration. However, it seems that modern medicine deny to believe in different humors and treats all patients with the same method. Therefore, in spite of its wide progress, it could not outreach traditional medicine in some aspects. In traditional medicine, there are different treatments based on different humors and so, therapeutic methods should be patient specific [17]. Furthermore, recognizing etiology and symptoms of diseases like epilepsy from traditional medicine perspective helps us to suggest a new practical classification for epilepsy and consequently it opens a new door to prevention and treatment of this disease.

## Conflict of Interest

None.

## Acknowledgment

None.

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