

## Fever rise as an epileptic sign in patients having complex partial seizures : two case reports

Bülent MÜNGEN\*, M.D., Cengiz YAKINCI\*\*, M.D., Ali AKYOL\*, M.D., Ömer ANLAR\*, M.D.

*In some patients having complex partial seizures, in addition to classic seizures fever rise as a characterization of seizures were rarely reported. In this article, we are presenting two cases who had fever rise in combination with complex partial seizures and related literatures are reviewed. [Journal of Turgut Özal Medical Center 1(4):301-303,1994]*

**Key Words:** Fever, epilepsy

### **Kompleks parsiyel nöbetlerde epileptik bir belirti olarak ateş yükselmesi : iki olgu sunumu**

*Kompleks parsiyel nöbetli hastalarda, klasik semptomlara ilaveten nadiren ateş yükselmesi rapor edilmiştir. Bu makalede kompleks parsiyel nöbetle birlikte ateş yükselmesi olan iki vaka sunuldu ve ilgili literatür gözden geçirildi. [Turgut Özal Tıp Merkezi Dergisi 1(4):301-303,1994]*

**Anahtar Kelimeler :** Ateş, epilepsi

Complex partial seizures (CPSs) generally originated from the focus in the temporal neocortex, amygdaloid-hippocampal complex or frontal lobe. In this kind of seizures; illusions, hallucinations, dyscognitive states, affective experiences, unconsciousness and automatism are the common signs which can be seen alone or in combination<sup>1,2</sup>. Patients having complex partial seizures, in some cases in addition to classic seizures fever rise as a characterization of seizures were extremely rare<sup>3-6</sup>. In this article, we are presenting two cases who had fever rise in combination with CPSs and related literatures are reviewed.

### **REPORT OF CASES**

#### **CASE 1**

A-15 year-old girl was admitted with convulsions which had began 6 months ago. The convulsions had repeated periodically two or three times in a month and had continued four or five minutes. During the

convulsion; the patient's cooperation was impaired, laughing and crying periods starts, resembled people to animals, unreasonable talking, and also running period which continues 1-15 minutes have seen. She could not remember anything else at the end of the convulsion. In physical examination: pulse 72/ min, blood pressure 120 / 70 mmHg, temperature 36.4°C. No disorder in her consciousness and cooperation was seen. Neurologic and other system examinations were also normal. In laboratory examination: CBC, ESR, blood sugar, BUN, SGOT, SGPT, urinary examination, cranial and lung x-ray were found normal. Brucella and Salmonella agglutination tests, thick blood films for Malaria were found negative. Interictal EEG showed bitemporoparietal sharp waves (Fig. 1). The patient's convulsion was occurred in 7 th day at the hospital. During the seizure, her consciousness and cooperation were broke down, at the beginning she cried approximately one minute and then began to laugh. She resembled the people surrounding as a fox, dog and wolf and try to talk them with meaningless words. Short running

\* : Fırat University Faculty of Medicine, Department of Neurology - Elazığ

\*\* : İnönü University Faculty of Medicine, Department of Pediatrics - Malatya

attacks were observed two times.

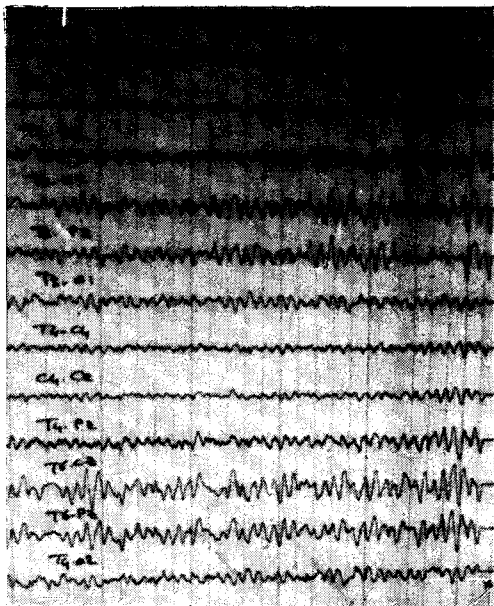


Figure 1. Interictal EEG showed bitemporo-parietal sharp waves

From the beginning of the convulsion the girl's fever began to rise at a peak point to 39°C. The convulsion was continued 35 minutes. The fever returned to its normal level at the end of the second hour. Ictal EEG could not taken properly because of the running attacks. Cranial computed tomography (CT) was found normal. Carbamazepine 600 mg/day was started to control the convulsions. She has been asymptomatic for a year.

#### CASE 2

A-34 year-old man who had been diagnosed as a temporal epilepsy and had been using phenobarbital and phenytoin improperly. At the time of administration he was not using any drug. In physical examination: pulse 80/min, blood pressure 140/80 mmHg, and body temperature was 36.3°C. His neurological and other systemic examinations were in the normal limits. In laboratory examination: Routine blood and urinary tests and X-rays (have done as in the first case) were found normal. Interictal EEG showed sharp waves in the left frontotemporal zone. He had a convulsion in the fourth day at the hospital. During convulsion his consciousness and cooperation were broke down.

Smacking, licking, swallowing and minimal clonic motions on the right hand fingers were observed. It had continued for 5 minutes. During the convulsion his body temperature rised to 37.9°C and returned to normal level at the end of the 45th minute. It was diagnosed as CPS. Ictal EEG was showed spike and sharp waves in the all canals (Fig. 2). Cranial CT was found normal. After starting carbamazepine 600 mg/day the seizures were controlled.

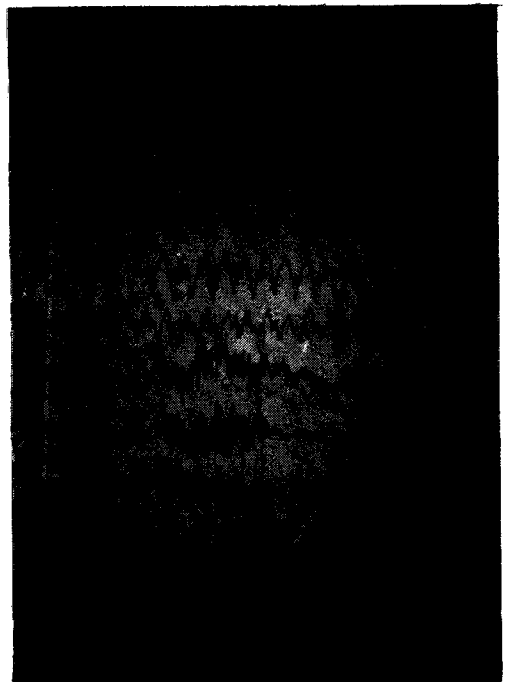


Figure 2. Ictal EEG showed spike and sharp waves in the all canals

#### DISCUSSION

Febrile convulsions are seen between 5 months and 6 years of age<sup>7</sup>. Body temperature can also rise during the grand mal seizure because of the hyperactivity of muscles<sup>6,8</sup>. With the exception of the grand mal and febrile convulsions, fever rise as an epileptic sign was very rarely reported<sup>3-6</sup>. The fever rise, in sometimes, may be ocured together with the other epileptic symptoms, but in some case it may be the only symptom of epileptic seizure. "Thermal epilepsy" is used as a name of these cases by Lennox<sup>4</sup>. The exact fever rise mechanisim has not known yet. It is believed that epileptic stimulus arised from the epileptic focus and spread on to the thermoregulatory center in the preoptic hypothalamus and causes a fever rise<sup>6,8</sup>. Reviewing

the cases reported in the literature, the fever rise differs between 37.2°C- 40°C. However in our two cases fever is increased up to 37.9°C in the first case and 39°C maximum in the second. Fever rise can be different from person to another and also from time to time for the same person<sup>5</sup>. The different fever rise in different seizures for the same person have not been known properly yet.

In conclusion, it is quite difficult to find out the cause of fever that patients have had an attack which is characterized with only fever. In such cases, it must be remembered that the fever rise can be the sign of seizure when we are working on the etiology of the unknown fever.

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**Correspondence :** Bülent MÜNGEN, M.D.,  
Associated Professor, Department of Neurology  
Faculty of Medicine, Fırat University  
23159 ELAZIĞ