

## **Sun downing Cramps: Interesting observations in 6 Cases of Psychogenic Non-Epileptic Seizures**

<sup>1</sup>Chaurasia Rameshwar Nath (DM), <sup>2</sup>Mishra Vijay Nath (DM),  
<sup>3</sup>Joshi Deepika (DM),

<sup>2</sup>Associate Professor & Head, <sup>3</sup>Professor <sup>1</sup>Assistant Professor, Department of Neurology  
Institute of Medical Science, Banaras Hindu University, Varanasi-221005, UP (INDIA)

**ABSTRACTS:** *Twenty to thirty percent of all refractory seizures, which present to neurology emergency, are diagnosed to be psychogenic non-epileptic seizures (PNES) which is a common CNS disorder in the general population, with an estimated prevalence of 2-33 cases per 100,000 populations. Here we are presenting, sun downing or evening limb muscular painful cramps as one of the interesting clinical findings in 6 patients of PNES. These were fully investigated and treated at our centre, following which 3 patients did not show appropriate improvement.*

**Keywords**—*Psychogenic non epileptic seizures (PNES), sun downing cramps, Video Electroencephalogram*

### **I. INTRODUCTION**

In past, many clinical symptoms and signs have been described to differentiate the PNES patients among the refractory seizure groups. It was important, as these patient's diagnosis had been difficult even at best centres and with many investigations being done. Video EEG has given some promising results in making appropriate diagnosis. We propose, a new clinical symptom, which may indicate the appropriate diagnosis of PNES.

### **II. MATERIAL AND METHODS**

We register 6 cases out of 64 PNES patient, over last 1 year for the present study. Of these, two patients were registered at Institute of Human Behaviour and Allied Sciences, Delhi and rest were registered at Institute of Medical sciences, Varanasi. The summaries of clinical details of all these patients have been given in Table –I.

Further, case summary of two patients (Case 1 & 5) have been depicted in text.

### **III. CASE DESCRIPTION**

Case 1: A 15 year old girl from Delhi, studying in ninth standard was brought to our OPD with the complaints of evening muscular cramps in limbs for 2 months, which became painful as evening progressed followed by severe painful spasms in limb muscles, while she use to go to bed. Once laid on bed, her symptoms progressed to such an extent that she use to experience near death phenomenon. Following this she had repeated episodes of loss of consciousness, spasmodic cramps in muscles along with frothing from mouth. She was investigated in private hospital, showed normal neuroimaging and electroencephalographic studies. However, she was put on Carbamazepine, Valproate, clonazepam, and lacosamide. She did not show much improvement and the intensity of her symptoms increased. One significant history she gave was that, the cramps did not appear on that evening which she spent at her aunt's house. Video EEG was repeated, and was normal. She was put on antidepressants and counselling was done. Antiepileptic drugs were stopped. However, she did not show improvement in her cramps and episodes of unconsciousness.

Case 5: Another female, a 19 year BA student from Varanasi, came to us with her father, with history of repeated episodes of unconsciousness, preceded by myoclonic jerks, generalized seizures like episodes since last 4 months. On asking leading questions, attendants informed that one month prior to development of the symptoms, she had been complaining of repeated spasmodic cramps in limb muscles in evening, which became worse on lying down. She was put on Carbamazepine, clobazam, leveteracetam but without improvement. Her neuro-imaging, cardio-imaging, EEG, EMG, NCV revealed no abnormality. Video EEG was performed at our lab, which was again normal. Anti-depressants were added but there was not much improvement.

#### IV. DISCUSSION

Sun downing cramp (SDC) is new terminology and has never been described before. In this case series, we are proposing a new clinical sign in various cases of Psychogenic Non Epileptic Disorder (PNES), which will make the diagnosis of this relatively difficult disease easier. The presence of specific triggers that are unusual for epilepsy may suggest PNES, and which should be specifically sought during history taking i.e., emotional triggers, chronic pain, chronic fatigue, certain movements, sounds, lights, especially if they are reported to consistently trigger an apparent seizure. Misdiagnosis of epilepsy is common, around 25% of which turn out to be psychogenic nonepileptic seizures (PNES) which is most commonly misdiagnosed condition [1, 2, 3]. The most conclusive test to distinguish epilepsy from PNES is long term video-EEG monitoring[4] Despite the ability to diagnose PNES with near certainty by using video EEG monitoring, the time to diagnosis is long, about 7-10 years. PNES were predicted by preserved awareness, eye flutter, and episodes affected by bystanders (intensified or alleviated). In addition, as compared with signs viewed on video recording, eyewitness reports of these signs were not reliable [5]. SDC as one of the presenting complaints in all the above 6 cases have been reported in this series. All patients were diagnosed by international protocol of PNES.

Laboratory studies are useful only in excluding metabolic or toxic causes of seizures (eg, hyponatremia, hypoglycemia, drugs). Prolactin and creatine kinase (CK) levels rise after generalized tonic-clonic seizures and not after other types of episodes. However, sensitivity is too low to be of any practical value (i.e., Imaging Studies)[4].

In all the six cases, few interesting findings were common

- All patients are female, and in the teenage group
- All had history of evening cramps, which were situation dependent
- All were on three or more anti-epileptics, and did not respond to the medications
- Neuro-imaging, neurophysiologic investigations were normal
- All the patient's attendant had taken active interest in consulting alternative traditional quakes as last resort of the treatment

Reasons for SDC may be multiple. It has been reported in various literatures that psychogenic illness or behaviour generally precipitates in evening or in Sun downing period. The causes of such precipitations may be related to the neuroendocrinal changes of melatonin or calcium metabolism hormones related to sun light changes. Medications are ineffective in the treatment of psychogenic disorders. Patients who are diagnosed with psychogenic seizures are usually referred to a psychotherapist for psychotherapy and behavioural modification methods.

#### REFERENCES

- [1]. Benbadis SR, Tatum WO. Overintepretation of EEGs and misdiagnosis of epilepsy. J Clin Neurophysiol. Feb 2003;20(1):42-4
- [2]. Benbadis SR, Lin K. Errors in EEG interpretation and misdiagnosis of epilepsy. Which EEG patterns are over read?. Eur Neurol. 2008; 59(5):267-71
- [3]. Benbadis SR. Errors in EEGs and the misdiagnosis of epilepsy: importance, causes, consequences, and proposed remedies. Epilepsy Behav. Nov 2007;11(3):257-62
- [4]. Mellors JDC. "The approach to patients with "non-epileptic seizures"". *Postgrad Med J*.2005; 81 (958): 498–504
- [5]. Syed TU, Lafrance WC Jr, Kahrman ES, et al. Can semiology predict psychogenic nonepileptic seizures? a prospective study. Ann Neurol. Jun 2011;69 (6):997-1004

**Table I: Clinical summary of 6 patients of PNES with evening muscle cramps**

| Serial no. | Age (years) | Sex | Address | Duration of illness (months) | Presenting Complaints  | Associated complaint   | Loss of consciousness | Treated by tetrakis | Inducibility | Neuroimaging | Video EEG | Associated psychiatric disorder | Status Epilepticus | Anti-epileptic medication history | Outcome |
|------------|-------------|-----|---------|------------------------------|--|--|-----------------------|---------------------|--------------|--------------|-----------|---------------------------------|--------------------|-----------------------------------|---------|
| 1          | 15          | F   | Delhi   | 2                            | Evening limb muscles cramps, increases with lying down positions | Followed by myoclonic jerks and seizure like activity, followed by loss of consciousness |                       | Yes                 | No           | N            | N         | Stubborn                        | Y                  | 2                                 | Poor    |
| 2          | 16          | F   | VNS     | 8                            |  |  |                       | Yes                 | Yes          | N            | N         | None                            | N                  | 3                                 | Good    |
| 3          | 14          | F   | ALD     | 2                            |  |  |                       | Yes                 | No           | N            | N         | Anxiety neurosis                | N                  | 4                                 | Good    |
| 4          | 17          | F   | GZD     | 4                            |  |  |                       | Yes                 | Yes          | N            | N         | None                            | N                  | 5                                 | Good    |
| 5          | 19          | F   | VNS     | 5                            |  |  |                       | Yes                 | Yes          | N            | N         | Depression                      | Y                  | 4                                 | Poor    |
| 6          | 16          | F   | VNS     | 11                           |  |  |                       | Yes                 | Yes          | N            | N         | None                            | N                  | 5                                 | Poor    |