

CASE REPORT

CASE REPORT OF SECONDARY NARCOLEPSY PRESENTING AS SELF-INFLICTED GENITAL INJURY

Radha J Mehta¹, Vishal Gandhi², Nilima D Shah³, Ritambhara Y Mehta⁴

¹M.D. Psychiatry, Assistant Professor, Hospital for Mental Health, Ahmedabad, ²A.D.P.M. Psychiatry, Government Medical College Surat, Gujarat, ³M.D.Psychiatry, Assistant Professor, B.J.Medical College, Department of Psychiatry, Ahmedabad, ⁴Professor and Head, Department of Psychiatry, Government Medical College, Surat

ABSTRACT:

Primary Narcolepsy is a sleep disorder with classical presentation showing symptoms of cataplexy, excessive daytime sleepiness, sleep paralysis, and Hypnagogic hallucinations. A rare case of secondary narcolepsy was seen in a patient with self-inflicted genital injury. A 30 year old male was referred to Psychiatry from Surgery for a self-inflicted incised wound on hydrocoele. Since last 1 year, he had multiple episodes of - 1. Sudden falls while working 2. Sleep during daytime often at unusual places 3. Periods of unresponsiveness during which he was aware but unable to move. During hospital stay, daytime somnolence, sleep paralysis and cataplexy were noted several times, but hallucinations were not consistently reported. Based on DSM-IV-TR Narcolepsy was diagnosed. Possible reasons for genital injury were 1. To remove fluid from swelling 2. Under sleep paralysis 3. Under Hypnagogic hallucinations. Patient's EEG was normal. MRI brain showed Gliosis at cervico-medullary junction. MRI spine was advised to examine the cervico-vertebral junction but patient was lost to follow-up. But from history and investigations, it was concluded that he had secondary narcolepsy due to traumatic brain injury. Narcolepsy typically begins in young adulthood mainly 2nd decades of life and causes adverse effects on quality of life of patients. Diagnosis relies on history of patient and objective details obtained from polysomnography and multiple sleep latency testing. Main treatment is symptomatic relief through medication, psycho education, and behavioural modification.

Key-words: Cataplexy, Narcolepsy, Polysomnography, Self inflicted injury

Corresponding author: Dr Radha Mehta, 202, Meet Complex, Opp. Nilkanth Temple, Tapodhan Street, Navsari-396445. Gujarat. E mail: radhe211@yahoo.co.in

This article may be cited as: Mehta RJ, Gandhi V, Shah ND, Mehta RY. Case report of Secondary Narcolepsy Presenting as Self-Inflicted Genital Injury. J Adv Med Dent Scie Res 2015;3(5):S71-S73.

INTRODUCTION:

Narcolepsy is neither a type of epilepsy nor a psychogenic disturbance. It is an abnormality of the sleep mechanisms specifically, REM-inhibiting mechanisms. Primary Narcolepsy has been studied in dogs, sheep, and humans. Few conditions that lead to secondary narcolepsy are tumors, traumatic brain injury and stroke.^[1]

Narcolepsy can occur at any age, but it most frequently begins in adolescence or young adulthood, generally before the age of 30. The disorder either progresses slowly or reaches a plateau that is maintained throughout life.^[2] The

prevalence of narcolepsy varies across countries and with different ethnic groups, so the exact prevalence is not known. Prevalence has been reported to be between 168 and 799 per 100,000 in most studies, although Japanese studies have indicated a higher prevalence of 1600 per 100,000.^[2,3] No genetic tests are currently available to make diagnosis of narcolepsy. Genetic tests may correlate best to narcolepsy when there is already established cataplexy.^[4]

Supporting the evidence for an environmental influence is the fact that the disease is not apparent at birth, but commonly has its onset during the second decade of life. There are some precipitating

factors like, infections, head trauma, and changes in sleep-waking habits which have been identified in some cases.^[6] In many patients with traumatic brain injury (TBI), Chronic daytime sleepiness is a major, disabling symptom, but its aetiology is not well understood so far. One possible cause can be extensive loss of the hypothalamic neurons that produce the wake-promoting neuropeptide hypocretin which causes the severe sleepiness of narcolepsy, and partial loss of these cells may contribute to the sleepiness of the disorder. One study has found that the number of hypocretin neurons is significantly reduced in patients with severe TBI. This observation highlights the often overlooked hypothalamic injury in TBI and provides new insights into the causes of chronic sleepiness in patients with TBI.^[7] Substances like Amphetamine has been associated with addiction, psychosis and self-injurious behaviour. There are reports on some patients who repeatedly and severely mutilated their own genitalia while intoxicated with amphetamines and consider possible diagnostic aetiologies.^[8] Genital mutilation is common in males compared to females.^[9] But narcolepsy presenting as self inflicted genital injury has not been reported so far. That is why this is a rare case.

CASE REPORT:

A case of secondary narcolepsy was seen in a patient presenting as self-inflicted genital injury. A 30 year old Hindi speaking illiterate male was referred to Psychiatry from Surgery for a self-inflicted incised wound on hydrocele. After primary wound closure at surgical side, patient was taken transfer to Psychiatry for detailed assessment. When detailed history was obtained from patient's elder brother and father, it was found that since last 1 year, he had multiple episodes of sudden falls while working at kitchen as he was a cook. He used to sleep during daytime often at unusual places like in the courtyard, once over the road and sometimes in bathroom. Patient also had periods of unresponsiveness during which he was aware but unable to move himself even on painful stimulation. During hospital stay, daytime somnolence, sleep paralysis and cataplexy were noted several times, but hallucinations were not consistently reported. Based on DSM-IV-TR Narcolepsy was diagnosed. Possible reasons for genital injury were 1. To remove fluid from swelling 2. Under sleep paralysis 3. Under Hypnogogic hallucinations. Patient's EEG was normal.



Figure 1: Photograph showing scrotal injury



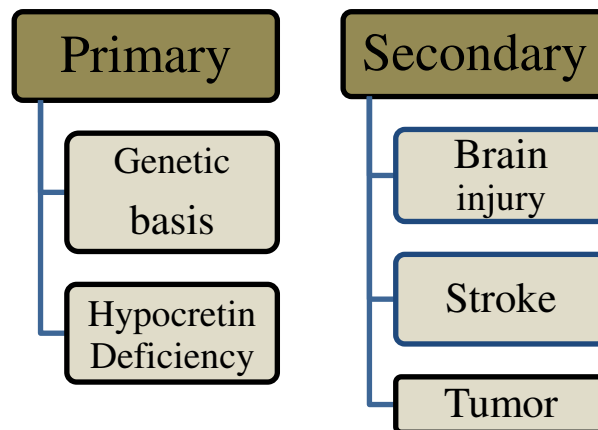
Figure 2: Gliosis

MRI brain showed Gliosis at cervico-medullary junction. MRI spine advised to examine the cervico-vertebral junction but patient was lost to follow-up. But from history and investigations, it was concluded that he had secondary narcolepsy due to traumatic brain injury.

DISCUSSION:

Narcolepsy is a condition characterized by excessive sleepiness, as well as auxiliary symptoms that represent the intrusion of aspects of REM sleep into the waking state. The sleep attacks of narcolepsy represent episodes of irresistible sleepiness, leading to perhaps 10 to 20 minutes of sleep, after which the patient feels refreshed, at least briefly. They can occur at inappropriate times (e.g., while eating, talking, or driving and during sex). The REM sleep includes Hypnogogic and Hypnopompic hallucinations, cataplexy, and sleep paralysis. The appearance of REM sleep within 10 minutes of sleep onset (sleep-onset REM periods) is also considered evidence of narcolepsy. The disorder can be dangerous because it can lead to automobile and industrial accidents.

TYPES OF NARCOLEPSY



Other symptoms include Hypnagogic or Hypnopompic hallucinations, which are vivid perceptual experiences, either auditory or visual, occurring at sleep onset or on awakening. Patients are often momentarily frightened, but within a minute or two they return to an entirely normal frame of mind and are aware that nothing was actually there. Here patient had symptoms of narcolepsy after head injury and patient himself injured his scrotum with sharp blade for which he had no clear memory and there was no history suggestive of epilepsy so diagnosis of secondary narcolepsy presenting as self-inflicted genital injury was considered. In this case, patient showed clinical features of narcolepsy as diagnosed by DSM- IV which was secondary type as there was history of multiple falls and MRI brain showed gliosis. But in this case, unusual presentation was genital self-inflicted injury.

Possible reasons for genital injury are:

1. Automatic behavior.
2. Acting on Hypnagogic/Hypnopompic hallucinations.
3. Due to impaired cognitive function/ judgment due to long-standing Narcolepsy.

No cure exists for narcolepsy, but symptom management is possible. A regimen of forced naps at a regular time of day occasionally helps patients with narcolepsy and, in some cases, the regimen alone, without medication, can almost cure the condition. When medication is required, stimulants are most commonly used.^[10] Although drug therapy is the treatment of choice, the overall therapeutic approach should include scheduled naps, lifestyle adjustment, psychological counselling, drug holidays to reduce tolerance, and careful

monitoring of drug refills, general health, and cardiac status.

REFERENCES:

1. Peacock, Jeremy, and Ruth M. Benca. "Narcolepsy: Clinical features, co-morbidities & treatment." (2010).
2. Longstreth WT, Jr., Koepsell TD, Ton TG, Hendrickson AF, van Belle G. The epidemiology of narcolepsy. *Sleep* 2007; 30 : 13-26.
3. Tashiro T, Kanbayashi T, Iijima S, Hishakawa Y. An epidemiological study on prevalence of narcolepsy in Japanese. *J Sleep Res* 1992; (Suppl 1) : 228.
4. Bourgin P, Zeitzer JM, Mignot E. CSF hypocretin-1 assessment in sleep and neurological disorders. *Lancet Neurol* 2008; 7 : 649-62
5. Krahn LE, Pankratz VS, Oliver L, Boeve BF et al, Narcoleptic and schizophrenic hallucinations. Implications for differential diagnosis and pathophysiology. *Eur J Health Econ.* 2002; 3 (Suppl 2) : S94-8.
6. Bourgin P, Zeitzer JM, Mignot E. CSF hypocretin-1 assessment in sleep and neurological disorders. *Lancet Neurol* 2008; 7 :649-62.
7. Christian R. Baumann MD, Claudio L. Bassetti MD, Philipp O. Valko MD, Johannes Haybaeck MD, et al "Loss of hypocretin (orexin) neurons with traumatic brain injury"
8. Joshua A. Israel and Kewchang, Lee Article first published online: " Amphetamine usage and genital self-mutilation." 2002 DOI: 10.1046/j.1360-0443.2002.00230.x
9. Martin, Tina, and Wagner F. Gattaz. "Psychiatric aspects of male genital self-mutilation." *Psychopathology* 24.3 (1991): 170-178.
10. Mendelson W. Sleep disorders. In: Sadock BJ, Sadock VA, eds. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry.* 8th ed. Vol. 1. Baltimore: Lippincott Williams & Wilkins; 2005:2022.

Source of support: Nil

Conflict of interest: None declared