

If I Laugh or Cry, I Will Fall: A Case Report of NarcolepsyAgarwal Rohit, MBBS, DPM^{1*}, Patel Kamlesh, MBBS, MD²

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Abstract: Narcolepsy is condition characterized by extreme tendency to fall asleep whenever in relaxing surroundings. Narcolepsy is the prototypical example of sleepiness produced by central nervous system dysfunction of sleep mechanisms. The etiology stems from a genetically triggered hypocretin dysfunction and deficit. The classical form of narcolepsy (narcolepsy with cataplexy) is characterized by a tetrad of symptoms 1) excessive day time sleepiness 2) cataplexy 3) sleep paralysis 4) hypnogogic hallucinations. Patients with narcolepsy have an abnormal sleep architecture in which REM sleep occurs soon after sleep onset both at night and daytime naps. Narcolepsy is known to afflict 10 to 60 individuals of 10,000. Symptoms commonly appear in second decade of life. Present case describes a 19 year old female who came to Psychiatry outpatient department with a history of episodes of fall (without loss of consciousness) during heights of emotion like laughing/ weeping since last 3 months. Such episodes were happening 2-3 times/day. She also reported of having excessive sleepiness since last 3 months and experiencing bad dreams. Parents reported her of talking in sleep. Diagnosis of narcolepsy (with cataplexy) was considered. Present case addresses the manifestation of narcolepsy in conjunction with other sleep disorders.

Keywords: Narcolepsy, REM sleep, cataplexy, hypocretin.

INTRODUCTION

Narcolepsy is a condition characterized by extreme tendency to fall asleep whenever in relaxing surroundings. Narcolepsy with cataplexy is characterized by a tetrad of symptoms- excessive daytime sleepiness, cataplexy, sleep paralysis and hypnogogic hallucinations. In a state of cataplexy, intense emotional state triggers objective transient muscle weakness verified by areflexia [1]. Clinical manifestations are varied, ranging from involuntary eye closure and neck weakness to a subtle buckling of the knees to generalized muscle weakness that causes the patient to collapse [2].

CASE REPORT

A 19-years-old unmarried lady studying in B.A.1st year, presented with history of episodes of fall at heights of emotions (like anger/ laugh/ cry) since 3 months. There was no history of loss of consciousness during these episodes of fall. She would regain her posture immediately on control of her emotions. Episodes occurred 2-3 times per day. She also reported of having excessive day time drowsiness past 3 months and experiencing bad dreams. She would doze off to sleep when in class and her friends had to wake her up. She would feel fresh after waking up. Parents reported her of talking in sleep and she had nearly 14-18 hours of sleep per day. Patient also reported of decreased interest and concentration in studies and easy fatigability.

Diagnosis of Narcolepsy (with Cataplexy) was considered. Ideally Sodium Oxybate is the drug of choice but due to non-availability, she was prescribed Tab. Methylphenidate 10mg and Tab. Imipramine 25mg. After a month's follow up patient did not have episodes.

DISCUSSION

Narcolepsy is estimated to afflict 10 to 60 individuals per 10,000. Symptoms commonly appear in second decade of life. Cataplexy is one of the most intriguing examples of how thought content can alter neurological functioning. An intense emotional state can induce cataplexy as in our patient. Recently narcolepsy with cataplexy was associated with deficiency of neuropeptide hypocretin 1 produced by small number of cell bodies located only in the lateral hypothalamus[3].The decreased muscle tone observed in cataplexy is similar to the absent electromyographic tone documented during REM sleep. Therefore cataplexy is believed to represent dissociated REM phenomenon intruding into wakefulness after an emotional trigger. Laughter stands out as the emotional trigger most likely to provoke cataplexy [4]. Factors that determine the cessation of cataleptic episode are unknown but are suspected to be related to increase in norepinephrine and serotonin relative to acetylcholine. There have been case reports with similar presentation which have shown improvement on treatment with

stimulants and antidepressants which suppress REM sleep.

CONCLUSION

Cataplexy is considered pathognomic of narcolepsy. An intense emotional state can induce cataplexy. Evidently, the hypocretin deficiency renders the subject vulnerable to laughter, causing abrupt transitions in neurotransmitters, putatively with increase in cholinergic activity, and reductions of norepinephrine and serotonin functioning. Significant improvement can be seen with Tab. Methylphenidate and Tab. Imipramine.

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