

An Overview of Narcolepsy

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Abstract: Cataplexy and excessive daytime sleep (EDS) are the common symptoms in the sleep disorder namely, narcolepsy. In this paper we give the brief description about, what is narcolepsy? How it is evenly found in both types of gender and at what age it starts to show up its symptoms? Apart from introduction and symptoms, Meditation for treatment of narcolepsy is also discussed. MSLT (Multiple sleep latency test) and MWT (Maintenance of wakefulness test) are the existing tests for measuring sleepiness. Sleep Latency (SL) is the main measures of sleepiness computed in these tests.

Keywords: Narcolepsy, Cataplexy, Maintenance of Wakefulness Test (MWT), Multiple Sleep Latency Test (MSLT), Hypocretin, EEG.

1. INTRODUCTION

Narcolepsy is a sleep neurological sickness that typically instigates in life. Sleepiness may happen in the form of recurring & irresistible attacks of sleep. Incidents of a person abruptly drops of sleep in rare situations, like though walking, eating. It establishes as sleep conflicts & rapid eye movement sleep wonders that impose into survive of affected entities. It is categorized in hypersomnia i.e. collection of sleep sicknesses entirely have daytime tiredness as major indication. Tiredness is additional leak in dull, repetitious positions that entail no active contribution. Narcolepsy is affected less than approximately 2% of human.

Approximately 90% of persons with narcolepsy must hypocretin low stages now the cerebrospinal fluid. Narcolepsy is subdivided into two parts:

With Cataplexy It is the most devastating symptom in a few patients, causing total loss of muscle tone and following collapse several times a day; it occurs hardly and causes only transient weakness of the facial musculature in others.

Narcolepsy with cataplexy has been shown to be characterized by a loss of the hypocretin peptide and of the cells producing this peptide. All human narcoleptic brains we have studied have some alive hypocretin cells with approximately normal morphology. Unfortunately collection of the brains of human narcoleptics has been largely limited to patients with cataplexy. Hypocretin deficiency can be tested by measuring cerebrospinal fluid (CSF) concentrations of hypocretin, one third of normal values or 110 pg/ml being the most optimal cutoff based on receiver operating characteristics curve analysis. Occurrence for narcolepsy-cataplexy is recognized at 0.02-0.05% in the US, Western Europe, and Korea. Patients suffering from narcolepsy-cataplexy also show disturbed nocturnal sleep with regular awakenings, even though total sleep time over the 24-hr period is generally within the normal range. After the discovery that many patients enter rapid eye movement (REM) sleep rapidly upon falling asleep, a rare occurrence in control patients, the Multiple Sleep Latency Test (MSLT) was developed as a diagnostic tool for the

condition. A mean sleep latency (MSL) of less than or equal to 8 min and the observation of at least 2 sleep onset rapid eye movement periods (SOREMPs) during MSLT were established as diagnostic criteria for narcolepsy using patient groups containing a large majority of patient with cataplexy

Without Cataplexy Narcolepsy without cataplexy is a difficult, heterogeneous disorder. With growing number of patients without cataplexy but with an objection of unexplained daytime sleepiness were being recognized, some of whom had a positive MSLT. This conclusion has led to an increasing number of patients being diagnosed with narcolepsy without cataplexy.

This diagnostic entity was recognized by the ICSD-2 as diverse from narcolepsy with cataplexy but a probable etiologic heterogeneity was noted. With growing familiarity about sleep problems, another group of patients with narcolepsy without cataplexy likely have false-positive MSLT results. So because of etiologic heterogeneity and the possibility of false-positive MSLT results, a clear diagnosis is very difficult to found for these patients, and narcolepsy without cataplexy is a diagnosis of prohibition

Narcolepsy can occur at several age, even though the widely held the people identified with narcolepsy bring into being to display signs among age of 11 years & 26 years. Narcolepsy is uniformly found in both men and women's, so there is no gender related problems

2. CAUSE OF NARCOLEPSY

The various causes of narcolepsy are

Major cause of human narcolepsy remains mysterious, but as per researches the people with narcolepsy are lacking in hypocretin (also called orexin), a chemical in the brain that activates arousal and regulates sleep. Narcoleptics generally do not have as many Hcrt cells (neurons that secrete hypocretin), preventing his or her ability to fully control alertness, which accounts for his or her tendency to fall asleep.

- Narcolepsy is a disorder of neurons in the posterior hypothalamus that produce the neuropeptide orexin.
- Narcolepsy can be caused by environmental trigger of some sort—a virus, for example—may affect your brain chemicals and cause narcolepsy.
- These variations can be fleeting, as the short levels establish in numerous hurtful brain damage patients may well arrival to common after 6 months.

3. MEDITATION FOR TEHE TREATMENT OF NARCOLEPSY

Medication can be helpful in treating the major symptoms of narcolepsy: alertness and cataplexy .Commonly approved drugs for narcolepsy are stimulants, antidepressants, and sodium oxybate. All medications have side effects so be certain to check with your doctor first. Even if your narcolepsy symptoms require the use of prescription medication, specialists recommend combining a drug regimen with life style changes and counseling or therapy.

Common medications used to treat narcolepsy symptoms include:

- **Stimulants.** They have a history of depression, mania, or Stimulants are the backbone of drug treatment for narcolepsy. These include Modafinil (Provigil), which is used during the day to encourage wakefulness and alertness. Side effects of modafinil may include headache, nausea, dry mouth, and diarrhea. Psychiatric side effects, such as anxiety, mania, hallucinations, and suicidal thinking have also been reported, so the drug should be avoided if you psychosis.
- **Sodium oxybate (Xyrem).** This kind of drug may be prescribed if you have severe cataplexy. Sodium oxybate is also known as GHB, or the "date rape drug," but is considered safe for treating narcolepsy when used responsibly to promote sound sleep, diminish daytime sleepiness, and reduce incidences of cataplexy. However, the side effects can be serious and may include nausea, bedwetting, and worsening of sleepwalking. Too high a dose can even lead to difficulty breathing, coma, and death.
- **Antidepressants.** Selective serotonin reuptake inhibitors (SSRIs) used to treat depression may also be used to help suppress REM sleep, and relieve symptoms of cataplexy, hallucinations, and sleep paralysis. These include fluoxetine (Prozac), sertraline (Zoloft), and newer antidepressants such as venlafaxine (Effexor). While the most common side effects of antidepressants include decreased sexual desire, digestive problems, restlessness, headache, and insomnia, there can also be dangerous side effects.

4. METHODS FOR DETECTING NARCOLEPSY

Maintenance of Wakefulness Test (MWT): The MWT shows the capacity of a patient to stay awake for a defined period of time. In this test patient sits in bed, resting against pillow, in a dimly lit room.

So in this test subject wants to be awake for about 20 to 40 min. Clinical relevance of the MWT is based on the

evidence that the Volitional capability to stay awake offers vital information about the ability to stay awake and reply to intervention for a disorder related with excessive sleepiness. Researches reveal significant changes in mean sleep latency values between normal healthy subjects and subjects with excessive sleepiness due to narcolepsy, and in subjects with narcolepsy calculated before and after treatment.

As with the MSLT, mean sleep latency values are influenced by physiological, psychological, and test protocol variables. The basic difference between these two tests situations are: the patients posture, the degree of support for head, having open eyes or closed, room light(dimly lit or dark).

MULTIPLE SLEEP LATENCY TEST (MSLT) Sleep specialists measure the severity of daytime sleepiness with the Multiple Sleep Latency Test (MSLT). The MSLT is a daytime nap study that is performed after an overnight sleep study (polysomnogram). It documents how quickly people fall asleep during quiet daytime situations. During the MSLT most people with narcolepsy fall asleep in an average of less than eight minutes, and often in less than five minutes. They also show a tendency to enter the stage of rapid eye movement (REM) sleep much faster than normal sleepers. The primary distinguishing features of most cases of narcolepsy are EDS and cataplexy.

5. CONCLUSION

This paper gives reader opportunity to understand the narcolepsy briefly. In future we will try to develop an algorithm for detecting narcolepsy in short period of time.

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