

## Caffeine Induced Restless Legs Syndrome

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**Abstract:** Restless legs syndrome (RLS) an unusual condition was reported due to excess consumption of coffee drink and eating coffee chocolates. A female software employee aged 45 years admitted in hospital with the chief complaints of back pain, sleeplessness nights due to rhythmic and pulling sensations at her lower limbs. She was an Indian origin but settled in America and came to India. Her history was found to be frequent consumption of coffee 10-12 times per day and eating coffee chocolate atleast 3 per day. Her family history was known with parkinson's disease in her grandfather. She has past medication history. She was treated with tramadol 100mg, pantoprazole 40mg and diazepam 2mg for one week but no recovery was observed in rhythmic and pulling sensations but well responded to back pain. She was raised with series of questions and understood ease of sensations during walking. Later patient was strictly counseled against having coffee and chocolate consumption, patient tried to give up of having coffee drink, and that it makes her symptoms relief from pulling sensations better. Although patient suffered from withdrawal symptoms of caffeine like lack of concentration, headache and depression after patient counseling, patient responded well against her sensations over legs.

**Keywords:** Caffeine, sensations, coffee, coffee chocolates, sleeplessness, Parkinson's disease.

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### I. INTRODUCTION

Restless Legs Syndrome (RLS) can express in a condition which have an uncomfortable sensations and an uncontrollable urge to move the lower limbs. It typically occurs in the late afternoon or evenings and nights when the person is sitting or lying in bed [1-3]. It has no serious physical complications but it worsens symptoms during night time troubling with sleeplessness [4].

The purpose to present is due to an unusual case in India of RLS induced with caffeine. It is a very rare case report were its prevalence is more in women than in men and severs with the increase of age in countries like European and North American [5, 6] regions but its prevalence in India has not known [7]. It is a sleep disorder affecting in general populations in a significant portion.

There are no specific tests to diagnose RLS. The following basic criteria clinically diagnose the disorder like a) Sensations during rest typically during sitting or lying in the bed which can be described as crawling, creeping, pulling, throbbing, aching, itching and sometimes as a muscle cramp and numbness. b) Temporary ease of sensations with walking, stretching or jiggling legs. c) Symptom worsens mainly at night. d) Periodic limb movement of sleep causes the legs twitch and kick throughout night. e) The person's neurological and physical exam including the person's medical and family history and list of current medications [8]. RLS may triggers due to drugs (prochlorperazine, metoclopramide, haloperidol, penothiazine derivatives, fluoxetine, sertraline and diphenhydramine). Laboratory tests rule out iron deficiency, renal disease, neuropathy and pregnancy (especially in last trimester) may cause RLS [9]. Heavy consumption of alcohol, nicotine and also caffeine may cause RLS [10].

The previous research study reveals there is no known exact mechanism but there are changes in the brains signaling pathway which impairs a transmission of dopamine signals in the brains basal ganglia. The brain arousal systems appear to be overactive and may produce to move when trying to rest and inability to maintain sleep. Researchers are measuring brain chemical changes using advanced magnetic resonance imaging to evaluate their relation to the disorders symptoms in hopes of developing new research models and to correct the overactive arousal process. There is a relationship between genetics and RLS and its discovery is still going on [11, 12]. There is also a documented report of higher prevalence of RLS in Parkinsons disease in one of the case control study [13].

RLS symptoms may vary from person to person, in severity and frequency and in day to day life. In moderate cases symptoms happens once or twice a week but often result in delay of sleep onset with the disturbance of daytime function. In severe cases symptoms result in burdensome interruption of sleep and impairment of daytime function [14]. The causative factor of caffeine and alcohol for RLS needs a symptomatic treatment and the coffee drink and eating coffee chocolates with a proper counseling should be avoided [15, 16].

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## **II. CASE PRESENTATION**

A 45 years aged women who was a software employee has consulted to physician with chief complaints of backpain and sleeplessness in nights with a kind of regular rhythms and pulling in her legs. Her social history was known that he has a habit of having 10-12 coffee drinks and average of 3 coffee chocolates per day due to her work stress. She was an Indian Origin, but settled in America and came to India. Her family history was known that her grandfather was known case of parkinson's disease. She has no past medication history.

She was suggested for complete blood picture tests but founded everything normal. The patient was treated with tramadol 100mg OD, pantoprazole 40mg OD, and diazepam 2mg for is chief complaints for one week. Her back pain was relieved but the sensations in her lower limbs were not yet relieved during night time.

The patient was raised with a series of questions to know her problem, it was understood that she feel ease of sensations during walking or mild exercises and worsens symptoms during night which causes legs to twitch and kick. So it was understood that diagnosis with a suspect of Restless legs syndrome. She was treated with diazepam 2mg for one week and suggested to avoid coffee drink and eating coffee chocolates. She was responded well and feels better from rhythmic sensations and pulling after one month of her coffee drink and eating coffee cocolate withdrawal. Initially the patient suffered from caffeine withdrawal symptoms like lack of concentration, sleepiness and depression but the patient is well responded against her RLS.

## **III. DISCUSS ION**

This was an unusual case report of RLS in a 45 years aged female patient in India. The patient suffered from back pain and regular rhythmic and pulling sensations at her lower limbs usually at night where it makes the patient sleeplessness. These sensations were to be relieved during walking or any physical movement. The patient has a habit of having coffee atleast 10-12 times per day and eating chocolates 3 per a day.

The previous reports and literatures say that caffeine consumption more than a limit causes RLS. Her family history was also known to be with Parkinson's disease, as genetically it may cause a dopamine levels deficiency. So the patient was confirmed with a diagnosis of RLS. Researchers also say that in RLS there was impairment in transmission of dopamine in brain signaling pathways.

There is no such specific treatment for RLS. Initially it became difficult to understand and got her only a symptomatic treatment. Later she was strongly counseled to avoid from coffee drink and eating coffee chocolate. Although the patient suffered from withdrawal symptoms from caffeine like lack of concentration, headache and depression but the patient was responded well from relieve of her rhythmic and pulling sensations symptoms better than before.

## **IV. CONCLUSION**

This was an unusual case report of Restless legs syndrome. Heavy consumption of caffeine content should be avoided to overcome from restless legs syndrome and other caffeine related problems. Restless legs syndrome increases with age and has no cure, so regular monitoring of symptoms should be done with a proper counseling.

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