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Hypnic Jerks Associated with Insomnia

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A 38-year female fulltime working Optometrist presented to the Insomnia clinic with a history of six years of sleep onset insomnia. A complete history revealed medical conditions of hypertension, hypothyroidism controlled by prescribed medications. The patient had a good appetite and BMI of 28. She exercised by walking three afternoons per week. Her work shift varied in terms of start times: 9-5pm, 11-7pm or 1-9pm of which she had no control over. Corresponding to this, her bedtime varied from 11 to 11:45pm and wakeup times from 7-9am.

The patient spends her free time with in house "fixit" projects which she enjoyed. An all-night PSG ruled out Restless Legs Syndrome and Sleep Apnea. During the intake interview the patient revealed experiencing small body jerks throughout the day particularly near bed time. At the hour of sleep, this turns to full body jerks and sometimes lasts (reported at 50% of the time) into the first few hours of her night of sleep. Two-week sleep log data confirmed a sleep disturbance with varying sleep onset times, reporting's of body jerks 67% of the time that intruded upon her sleep onset and sleep after wakeup times.

The patient described the full body jerk as a switchblade opening/closing with her waist as the central fulcrum. She does not feel tingling, numbness or other sensory stimuli. The motor movement is a brisk, non-violent movement that she feels little control to stop or abbreviate. The average number of body jerks that she was conscious of at pre-sleep was seven as measured in the two-week sleep log assessment. The hypnic jerks had increases over the last twenty-two months and were intermittent since adolescence. The patient was asymptomatic for anxiety/stress-related or depression symptomology.

Sleep starts, or hypnic jerks are described in the literature as a type of parasomnia. The etiology is unknown although aberrant physiological components of muscular movements. Some studies have identified the incomplete action of the nervous system to oppose control on the motor system thus leaving some hypnic jerk movements [1]. Fryer (2014) measured intervertebral discs during sleep and found a gradual lengthening over the course of the night. It was hypothesized that as the spinal muscles relax, muscles lengthen thus provoking a stretch reflex [2]. Oswald (2016) conducted a series of case studies with all night polysomnography of patients free of medical conditions except for hypnic jerks. In all cases of this study, Oswald (2016) reported the occurrence of the hypnic jerks as occurring during stage one sleep.

The patient experiences of the hypnic jerks were reported to vary to some degree (i.e., feeling a warm sensation, tightness in limbs, no sensations). And, in all cases the occurrence of the hypnic jerks were unrelated to external events. Oswald (2016) concluded that the hypnic jerks occur as a result of poorly developed EEG K complexes. Additionally, the frequency and magnitude of the hypnic jerks preclude them from being considered as epilepsy [3].

The patient's medical and sleep history were not positive for a psychiatric diagnosis or parasomnia [4]. The patient presented the hypnic jerks as an annoyance experience that interfered with her sleep but was not anxious or extremely emotional about the condition. Following two weeks of sleep logging the patient participated in a six session Cognitive Behavioral Intervention for Insomnia (CBTi). Topics such as the basics of sleep, relaxation -mindfulness training and sleep schedule were discussed during these sessions. In addition, the patient was guided in mindfulness relaxation posture and some general gentle stretching exercises.

A presleep routine of twenty minutes mindfulness relaxation followed by quiet stretching was setup with the patient. The CBTi approach provides the patient with an active approach to alleviating their discomfort from the sleep disturbance. The additional skills applied of mindfulness relaxation provided the patient with some new coping skills that in turn increased her control of her condition [5]. Sleep log data indicated changes in sleep efficiency ranging from 10-38% improvement as compared to intake values. The incidence of the hypnic jerks followed consistent course in frequency with reductions in the latency and intensity. Overall, the patient reported satisfaction with further understanding her condition and being able to apply new coping skills.

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