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Review Article

Management of Sleep Disorders

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ABSTRACT
Sleep is a naturally recurring state of mind and body. Characterized by altered consciousness relatively inhibited sensory activity inhibition of nearly all voluntary muscles and reduced interactions with surroundings. Homoeopathy with its scientific firm time-tested principle of "Similia Similibus Curentur" has got a great potential to be useful in treating sleep disorders, as homoeopathy is equally effective, cheaper with no hazardous sign as compared to other system of medicine.
Keywords: Sleep, Homoeopathy, sleep disorders

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INTRODUCTION

Each night when I go to sleep, I die and the next morning when I wake up, I am reborn-Mahatma Gandhi.

Sleep is a naturally recurring state of mind and body. Characterized by altered consciousness relatively inhibited sensory activity inhibition of nearly all voluntary muscles and reduced interactions with surroundings Sleepiness is a serious, potentially life-threatening condition that affects not only the sleepy individual but also his or her family co-workers, and society in general International Statistical Classification of Diseases and Related Health Problems.

Homoeopathy with its scientific firm time-tested principle of "Similia Similibus Curentur" has got a great potential to be useful in treating sleep disorders, as homoeopathy is equally effective, cheaper with no hazardous sign as compared to other system of medicine. It can prove itself to be the best in developing countries like India, where millions of poor people below poverty line can afford it.

Normal Sleep: Sleep is one of the most significant of human behaviors, occupying roughly one third of human life. It is a universal behavior that has been demonstrated in every animal species studied from insects to mammals Sleep is a process the brain requires for proper functioning Prolonged sleep deprivation leads to severe physical and cognitive impairment and eventually, death Sleep may appear to be a passive process but in fact can be associated with a high degree of brain activation. There are several distinct types of sleep that differ both qualitatively and quantitatively Each type of sleep has unique characteristics functional importance and regulatory mechanisms The ancient Greeks ascribed the need for sleep to the god Hypnos (sleep) and his son Morphicus also a creature of the night who brought dreams in human forms. Dreams have played an important role in psychoanalysis Freud believed dreams to be the "royal road to the unconscious." They have figured prominently in art and literature from ancient times to the present. Sleep is made up of two physiological states, non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep.

Functions of sleep- The functions of sleep

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have been examined in a variety of ways Most investigators conclude that sleep serves a restorative, homeostatic function and appears to be crucial for normal thermoregulation and energy conservation.

Sleep Requirements - Some persons are normally short sleepers who require fewer than 6 hours of sleep each night to function adequately, long sleepers are those who sleep more than 9 hours each night to function adequately. Long sleepers have more REM periods and more rapid eye movements within each period (known as REM density) than short sleepers

Sleep Disorders: -Sleep is regulated by several basic mechanisms, and when these systems go awry, sleep disorders occur sleep disorders are both dangerous and expensive to treat. Obstructive sleep apnea research verifies its contribution to hypertension, heart failure and stroke Investigations link many major industrial catastrophes to sleepiness Sleepiness is a senous potentially life-threatening condition that affects not only the sleepy individual but also his or her family, coworkers, and society in general.

lcd-10:

International Statistical Classification of Diseases and Related Health Problems 10 Revision - G47.9

Sleep disorder, unspecified. G47.9 is a billable/specific ICD-10-CM code that can be used to indicate a diagnosis for reimbursement purposes

Pathobiology

Wakefulness is controlled by the reticular activating system of the rostral brain stem, which projects to the thalamus and cortex Inhibition of these projections, which is modulated by neurons in the pons and midbrain, results in sleep. REM sleep, during which most dreaming occurs is generated within the tegmentum of the pons with modulation from the norepinephrine- and serotonin-containing neurons of the locus ceruleus and the dorsal raphe nucleus Electrical events generated in the pontine reticular formation (e. ponto-geniculo-occipital [PGO] waves) are propagated through the oculomotor and visual system during REM sleep simultaneously with rapid eye movements. PGO waves are suppressed by norepinephrine, and serotonin neuronal systems suppress PGO waves and REM cholinergic neurons are stimulatory PGO input can induce an action potential in neurons below their usual threshold. Such PGO-facilitated activity in the visual system may play a role in the random imagery of dreaming

Hypocretins (orexins) are sleep modulatory neuropeptides made in the lateral hypothalamus with projections to the locus ceruleus and dorsal raphe, as well as to the thalamus, where they modulate the release of excitatory (glutamate) and inhibitory (y-aminobutyric acid) neurotransmitters Disruption of this system induces narcolepsy in animals, and hypocretin neurotransmission is deficient in most narcoleptic patients

Classification of Sleep Disorders

Sleep-wake disorders involve disruptions in sleep quality, timing, and amount that result in daytime impairment and distress According to American Sleep Disorder Association's International (ICSD) Diagnostic and coding manual it divides sleep disorder into four categories

1.Dysominas

2. Parasomnias

3. sleep disorders associated with medical-psychiatric disorders

4. Proposed sleep disorder

"James Sadock Alcott Sadock, et al have categorized sleep disorders in their book with DSM-5 and "Ravi Gupta in his book entitled- Psychiatry for beginners and "Michael J. Thorpy. Giuseppe Plazzi mentioned in their book the parasomnias and other sleep related movement disorders that sleep disorders include the following disorders

Insomnia- This is characterized by inability to fall asleep or multiple nocturnal awakenings or early morning awakening with difficulty in falling back asleep. Insomnia can be an independent condition, or it can be comorbid with another mental disorder another sleep disorder or another medical condition. They should be present

on at least three nights in a weak for a period of at least 3 months This is termed as "Insomnia disorder or if the duration of symptom is less, then the diagnosis is "Situational or Acute Insomnia it is seen in 10-15% of the population,

Hypersomnolence Disorder-Hypersomnolence disorder, or hypersomnia, occurs when a person excessive sleepiness despite 7 hour of sleep during the main sleep period and feels excessively tired despite normal or because of prolonged quantity of sleep. However, the patient must not have any other disorders like sleep apnea or narcolepsy etc To be considered clinically significant, symptoms must be present at least thrice a week for at least 3 months. It is seen with a prevalence of 1% with equal frequency between both genders.

Parasomnias-Parasomnias are marked by unusual behavior, experiences, or physiological events during sleep. This category is divided into three subtypes

a. Non-REM movement sleep arousal disorders, which involve incomplete. awakening from sleep accompanied by either sleepwalking or sleep terror disorder.

1. Sleepwalking Disorder or Somnambulism - It consists walking during sleep usually with blank face and open eyes, difficulty in waking up no recall of the episode Patients sit up and sometimes perform preservative motor acts, such as walking dressing, going to the bathroom, talking, screaming and even Driving.

2. Sleep Terrors Disorder or Pavour Nocturnus-Sudden onset inconsolable crying during sleep, appears frightened, not able to appreciate the surroundings and not able to recall the episode, or dream after waking up. It is an arousal in the first third of the night during deep sleep.

3. Sleep talking or Somniloquy - Talks during sleep, often coherent and able to communicate but not able to recall after waking up; no recall of the episode. The talking usually involves a few words that are difficult to distinguish

4. Sexsomnia disorder - Sexual activity during the sleep, often violent but not able to recall after being woken up, difficult to wake up.

5. Sleep-Related eating disorder - Eating during sleep, often large amounts and not able to recall in the morning and when made to wake up.

6. Sleep-Related Bruxism or Tooth Grinding-It occurs throughout the night most prominently in stage il sleep the condition often goes unnoticed by the sleepers except for an occasional jaw ache in the morning but bed partners and roommates are consistently awakened by the sound.

b. Nightmare disorder-In which nightmares induce awakering repeatedly and cause distress and impament Frightening dreams that wake up the personaving sympativetic arousal but becomes arented soon after waking up able to Rapid Eye Movement (REM) sleep behavior disorder - Which is characterizad by vocal or motor behavior during sleep These patients often act in their dreams often the dreams are violent and hence they injure themselves or their bed partner they are able to recall the dream on waking up recall the dream.

c. Rapid Eye Movement (REM)sleep behavior disorder-which is characterized by vocal or motor behavior during sleep.These patients often act in their dreams ,often the dreams are violent and hence they injure themselves or their bed partner, they are able to recall the dream on waking up.

Narcolepsy - Narcolepsy is marked by sleep attacks usually with loss of. muscle tone (cataplexy)

Breathing- Related Sleep Disorders - It is characterized by sleep disruption leading to excessive sleepiness or insomnia caused by a sleep-related breathing disturbance. There are three subtypes of breathing-related sleepdisorders

1. A. Obstructive sleep apnea (OSA) The most common of the three is obstructive sleep apnea hypopnea in which apneas (absence of airflow) and hypopneas (reduction in airflow) occur repeatedly during sleep, causing snoring snorting witnessed pauses during sleep nocturia. sleep talking daytime

sleepiness and fatigue
2. B Central sleep apnea (CSA) - CSA is the presence of Cheyne-Stokes breathing
in addition to apneas and hypopneas Results from periodic failure of central nervous system mechanisms that stimulate breathing
3. C Sleep-related hypoventilation - It causes elevated CO levels from decreased respiration. In which no significant apneic episodes are present.
Restless Legs Syndrome - Restless legs syndrome is the compulsive movement of legs during sleep.
Substance/Medication-Induced Sleep Disorder - This category includes sleep disorders that are caused by a drug or medication (eg alcohol, caffeine); .
Circadian Rhythm Sleep-Wake Disorders Underlying these disorders is a pattern of sleep disruption that alters or misaligns a person's circadian system, resulting in insomnia or excessive sleepiness. There are six types (1) delayed sleep phase type is characterized by sleep-wake times that are several hours later than desired or conventional times: (2) advanced sleep phase type is characterized by earlier than usual sleep-onset and wake-up times (3) irregular sleep-wake type is characterized by fragmented sleep throughout the 24-hour day with no major sleep period and no discernible sleep-wake circadian rhythm: (4) non-24-hour sleep-wake type is a circadian period that is not aligned to the external 24-hour environment, most common among blind or visually impaired individuals, (5) shift work type is from working on a nightly schedule on a regular basis, and (6) unspecified type that does not meet any of the above criteria.

Investigations

Clinical evaluation A detailed sleep history is the most informative 1. diagnostic tool Abnormal sleepiness is suggested by the history of sleep before lunch or supper even after adequate sleep at night or falling asleep while eating during short distance driving talking to people or during sexual activities it is important to supplement the patient's history by information obtained from the spouse or bed partner particularly regarding respiratory events doud snoring struggling respiration, or respiratory pauses Hatory regarding the use of drugs that could cause insomnia or sleepiness is important Psychiatric or psycho-physiologic disorders or medical and neurological illnesses which result in secondary sleep disorders should be noted.
Multiple sleep latency test (MSLT) is widely used to evaluate hypersomnolence The test involves allowing the patient to nap and recording the EEG at intervals of two hours on a day following an adequate night's sleep Patients with pathological hypersomnolence fall asleep in five minutes or less compared to the normal's who have mean sleep onset latency of over ten minutes MSLT also provides a mechanism for detecting abnormal tendency to achieve REM sleep Two or more sleep-onset REM periods (SOREMs) Le REM sleep emerging within 15 minutes of sleep onset, is considered diagnostic 2 of narcolepsy/cataplexy syndrome.
Polysomnography Most patients require monitoring of various physiologic parameters during at least one night's sleep. Episodes of sleep apnoea are usually more frequent and more severe during REM sleep which is usually missed in daytime naps Polysomnography records
1) EEG to distinguish wakefulness from sleep and for sleep staging,
2) eye movements
3) electrocardiogram,
4) electromyogram (EMG) of chin muscles.
5) EMG of tibialis anterior muscles
6) oral and nasal airflow.
7) Respiratory efforts of the chest and abdomen and
8)oxygen saturation.

Treatment

The clinician should discuss any myths or misconceptions about sleep that the patient may hold Lifestyle modifications and cognitive-behavioral treatments for sleep disorder may include
Relaxation training
Cognitive therapy

Stimulus control (SC)
Sleep restriction therapy (SRT)
Sleep hygiene
Relaxation Training for Sleep Disorders:
Methods such as progressive muscle relaxation (PMR) deep breathing techniques, imagery, and self-hypnosis may help some people overcome a sleep disorder. PMR involves helping the individual to sequentially tense and relax the body's major muscle groups while concentrating on contrasting sensations of tension and relaxations.

Cognitive Therapy for Sleep Disorders:
Cognitive therapy helps people with insomnia identify and correct inappropriate thoughts and beliefs that may contribute to insomnia. Cognitive therapy can give people the proper information about sleep norms age-related sleep changes. reasonable sleep goals and the influence of naps and exercise.

Stimulus Control for Sleep Disorders:
Stimulus control (SC) is a practice in which the bedroom is reserved for sleep and sex. SC derives from the idea that insomnia may be caused by bedroom associations unrelated to those uses such as stressful situations, or TV watching Therefore, the bedroom should be reserved for sleep sex and dressing only.

Sleep Restriction Therapy for Sleep Disorders
Sleep restriction therapy (SRT) is based on the belief that excess time in bed makes sleep problems worse SRT consists of limiting a person's time in bed to only that time where they are sleeping.

Sleep Hygiene for Sleep Disorders:
Sleep hygiene refers to practices, habits, and environmental factors that are important for getting sound sleep. The four general areas important to sleep hygiene are the circadian rhythm (24-hour cycle), aging, psychological stressors that cause mini-awakenings (in which the brain wakes up for just a few seconds) and stimulant use.

Circadian rhythms influence when, how much, and how well people sleep. These rhythms may be altered by the timing of various factors, including naps, bedtime, exercise and exposure to light.

Aging also plays a role in sleep. Sleep patterns change after people reach age 40 There are many more nocturnal awakenings as people age. The awakenings affect sleep quality and can interact with any other condition that may cause arousals or awakenings. The more awakenings people experience at night, the more likely they will awaken with a feeling of not being rested.

Psychological stressors such as exams, deadlines, or job stress may interfere with sleep. It is beneficial for people to develop some kind of pre-sleep ritual to break the connection between stress and bedtime. Some people find it helpful to make a list of all the stressors of the day, along with a plan to deal with them. In addition, periods of relaxation (meditating or taking a hot bath) can help a person relax and get to sleep

Stimulants can stay in the body as long as 14 hours and can increase the number of times you awaken at night, decreasing your total amount of sleep time. Avoid caffeine, nicotine and alcohol. The effects of nicotine, when consumed in high doses, are similar to those of caffeine Alcohol may initially sedate you, making it easier to fall asleep. However, you may be awakened after the alcohol is cleared from your system. Recent sleep research shows that alcohol consumption before bedtime may result in inadequate REM sleep, which the body needs to restore itself.

Sleep Diaries: General practitioners can make use of sleup daines in which patients record their sleep pattern for 1-2 weeks. Several diary templates are available on various
www.sleepeducation.com/pdt/sleepdairy pdf)
Sleep dianes can prod with insight into thoir actual sleep habits They often reflect sleep trends, such websites (e.g as erratic schedules or identify predominant sleep patterns, such as taking a patients long time to fall asleep frequent awakenings, early morning awakenings or a mixture They can provide a starting point for the management of sleep problems in a personalized manner and can be used to monitor progress of certain treatments.

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Do's and Don'ts for good sleep Hygiene: -

Maintain regular hours of bedtime and arising.

If you are hungry, have a light snack before bedtime.

Maintain a regular exercise schedule .

Give yourself approximately an hour to wind down before going to bed.

If you are preoccupied or worried about something at bedtime, write it down and deal with it in the morning.

Keep the bedroom cool.

Keep the bedroom dark

Keep the bedroom quiet.

Take naps

Watch the clock so you know how bad your insomnia actually is.

Exercise right before going to bed in order wear yourself out.

Donts

Watch television in bed when you cannot sleep.

Eat a heavy meal before bedtime to help you sleep.

Drink coffee in the afternoon and evening

If you cannot sleep, smoke a cigarette.

Use alcohol to help in going to sleep.

Read in bed when you cannot sleep.

Eat in bed Exercise in bed

Exercise in bed.

Talk on the phone in bed.

Homoeopathic management

Homoeopathy offers a much better treatment option for people suffering from sleep disorder. That is because homoeopathy does not aim at providing short term relief on the contrary homoeopathy aimed at completely curing and eradication of the disease. Of course, this requires sometimes as the immune system has to get back into original shape, where it recognizes one's own body as a friend and not as an enemy It is purely a natural treatment for sleep disorder and no steroid or hypnotic drugs (Benzodiazepines or "Z-drugs") are used Following are the commonly indicated homoeopathic medicines in the management of sleep disorders,

Chammomila: Imtable baby who refuses to be calmed. Steeplessness caused by teething anger or colic Moaning when asleep, eyes are half open when asleep. For the person who exhibits imtability peevishness and restlessness It is an antidote for over use of coffee Exhibits sleeplessness and restlessness during the first part of the night. They have frightening dreams

Arnica: Good for physical over work and when the bed feels too hard and uncomfortable. This remedy is also useful for jet lag.

Aconite: Used for acute insomnia caused by shock, fright bad news, or grief.Also for fear, anxiety and restlessness. May be taken by nightmares.

Coffea: Coffea, the homoeopathic remedy made from the coffee bean, is very useful in cases of sleeplessness when the mind is awake and working Shows inability to relax due to the overexcitement caused by good news or ideas Vivid dreams, overactive mind over excitement. The thoughts are not fixed on a disappointment, but never the less the nervous system seems to be overexcited as if from drinking too much coffee Take 3X to 200X for insomnia following too much coffee drinking.

Arsenic alb: When you feel sleepy during the day but anxious at night Restlessness in bed with anxious dreams and nightmares Also for warmth.warm drink, moving about and sleeping propped up in bed.

Calcarea phosporicum: Difficulty waking and getting up in the morning, waking up before midnight. Painful teething in restless babies. Anxious, irritable, sluggish and restless Dislikes routine. Babies who scream in their step and needs lots of attention.

Causticum: Bedwetting in the early part of night. Oversensitive child easily upset and tearful Afraid of dark. Strong sense of justice.

Cocculus: If exhaustion is related to changing work shifts or too many nights of staying awake, as when caring for a sick person. For over tiredness and exhaustion, use 12X .

Ignatia: Sleeplessness caused by shock, emotional stress or grief, where the person has become over wrought and moody, with

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frequent yawning or sighing Jerks limbs when falling asleep. Mood swings no thirst, dreams with bottled up anger and tension.

Kali phos: Right terrors, or waking with a sinking feeling in the stomach. Caused by excitement or mental strain Also for anxiety, irritability, and muscle fatigue. Exhausted by stress or over work.

Equisetum: Wetting the bed during dreams Nervous-system immaturity

Lachesis: sleep problems during the menopause Sensations of suffocation at the throat or bed swaying as u go to sleep Dread of going to bed because of sudden awakenings and the sensation of swaying. Tendency to hold breadth while feeling asleep. Night sweats. Waking anxious and feeling unwell.

Muriaticum acidum: Generally used for emotional problems.

Nux vomica Excellent for the person who is irritable and sleepless from stopping sedatives or from too much mental stress alcotsol or food. For alcohol, over eating especially spicy, foods, noise, lack of sleep the sleeplessness typically occurs after waking up very early in the morning. The person cannot get back to sleep until just before the alarm goes off, and then gets up stritable and angry from lack of sleep for wakefulness in the middle of the night. use 6X to 12X

Opiums- If the person is feeling sleepy but unable to get to sleep if the bed is to
hot or else sleep comes but it is so heavy that the person snores and cannot be roused

Pulsatilla: Early waking with an overactive mind and for recurrent thoughts For anxious or vivid dream, night sweats. Person is restless in first sleep feels to hot and throws covers off, then feels to cold and lies with arms above head, not thirsty or if the insomnia is worse after rich food

Sepia-Difficulty falling asleep. Waking early feeling unrefreshed Exhausted and depressed by over work and mental stress Feols irritable and sleepy during the day Suffers headaches nausea and dizziness due to tiredness Night sweats
maybe also present.

Sulphur: Awakened by the slightest noise and find it difficult to get back to sleep. Feels hot and throws limbs out from under the covers, Kopt awake by a continuous flow of ideas, Vivid nightmares, disturbed and unrefreshing sleep
waking in the early hours then sleeping late.

Thuja: Wakes up early and unrefreshed just before time to get up. Pain where you have been lying feeling cold sleep-talking, anxious dreams. stress headaches: .

"The important thing is not to stop questioning Curiosity has its own reason for existing." Albert Einstein.

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