

**ANALYTICAL APPROACH OF JATAMANSI PHANTA IN STRESS INDUCED
INSOMNIA****¹Poonam, ²Alok Kumar Srivastava, ³Dr Sanjay Gupta, ⁴Lalita Sharma and ⁵Diksha Upreti**^{1,4,5}MD Scholar, ²Professor, ³Associate Professor
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ABSTRACT

Insomnia is a highly prevalent sleep disorder that regularly affects million of people Worldwide. It is costly and can cause significant morbidity if not addressed appropriately. The world health organisation 2004 global burden of diseases report indicate 3.6 million years of productive healthy life is lost worldwide as a result of primary insomnia. About 20-25% of general population suffering regularly from insomnia and about 25-35% presenting transient or occasional insomnia. It has been noticed that women are more likely to have sleep difficulties than men. Elderly tends to suffer from insomnia more than other groups of population.

It is defined as difficulty in initiating sleep or maintaining sleep, sleep difficulties at least 3 nights a week or sleep difficulties that causes impairment of day time functioning. It has a lot of consequences for sufferers and may impact on health, work and quality of life. Among various causative factors of insomnia stress plays major role. survey findings show that stress may be getting in the way of quality sleep. Stressful situations increases the psychological and physiological activation in response to increased environmental demands. Such activation is incompatible with deactivation which is the main feature of sleep. Thus, the scientific literature confirms the common notion that stress disrupts sleep.

On the otherhand, the relationship between stress and sleep has to be evaluated in the light of its bidirectionality. In fact stress impairs sleep quality and chronic sleep difficulty is likely to become a stressor in itself, thus promoting a vicious circle of stress and insomnia. In Ayurveda Aahara, Nidra and Brahmacharya are described to trayopasthambas (three supportive pillars of life) so sleep is one of the pillars of life. It has been rightly stated by Acharya Charka that happiness, misery, proper and improper growth and good strength and weakness potency and sterility, knowledge and ignorance and most important life and death of an individual depends on quality of sleep.

In modern science the medication for insomnia sedatives, antidepressant, antihistamines which induces sleep but having significant ill effects on health and having risk of addiction and confusion and other mood depressing ill effects. In comparison to the therapeutic procedure of different systems of medicine Ayurveda has a very good

approach towards the treatment of insomnia. A good number of single drugs too are described in insomnia.

Here jatamansi phanta have been taken due to its safe sedative and hypnotic effects. The chemical constituents i.e valeranone and valepotrites are responsible for the chief effect of vallerian as a potent sedative. It inhibits enzyme induced breakdown of GABA in the brain resulting in sedation. This might be the probable reason that there was a significant improvement in the sign and symptoms of the patient.^[6]

DISEASES REVIEW

Insomnia is the complaint of poor sleep, with difficulty either in initiating sleep or maintaining sleep throughout the night, and causing significant distress and impairment in social, occupational or other important areas of functioning. People with insomnia are dissatisfied with their sleep and feel that it impairs their ability to function well in work, school, and social situations. Survey finding show that stress may be getting in the way of quality sleep.

TYPES

Transient insomnia –occur when symptoms last from a few days to a few weeks.

Acute insomnia-short term symptoms persist for several weeks.

Chronic insomnia- lasts for months and sometimes years. According to National Institutes of health the majority of chronic insomnia cases are secondary, they are side

effects or symptoms resulting from another primary problem.

PRECIPITATING FACTORS FOR INSOMNIA.

Psychological.

- Hyper arousal due to stress.
- The need to be vigilant at night is because of sick relatives or young children.
- Being on call.

Psychiatric

- Patients with depressive illness often have difficulty falling asleep at night and complain restlessness, disturbed and unrefreshing sleep.
- Anxiety disorders may cause patients to complain about their sleep.
- Disruption in circadian rhythm- job shift changes high altitudes, environmental noise, heat, cold etc.

Pharmacological

- Non prescription drugs such as caffeine or alcohol.
- *insomnia is a key features of alcohol withdrawal.
- Probably caffeine acts as an antagonist to adenosine the endogenous sleep promoting neurotransmitter.

Physical

- Pain, coughing and wheezing, respiratory and cardiovascular disorders etc

PATHOLOGY: In case of insomnia related to stress, alleviating the stress alleviates the insomnia. stress causes insomnia by making it difficult to fall asleep and to stay asleep, and by affecting the quality of sleep. Stress causes hyperarousal, and insomnia is often believed to arise from a state of hyperarousal.

DRUG REVIEW

- Jatamansi-Nordostachys jatamansi.
- Family-Valerianaceae.
- Rasa-tikta, kashya, madhura.
- Guna –laghu, snigdha, tikshna.
- Virya-sheet.
- Prabhava-bhutaghana (antipsychotic) manasdoshahara.

Chemical constituents: volatile oil essential oil, resin, sugar, jatamansone, valeronone.

It is a natural brain nervine tonic and memory enhancer which has calming, peaceful and relaxation features. It is included among the nidrajanan (sedative and hypnotic) drug in classics. Valeronone and valepotriates present in the drug are responsible for the chief effect of valerian as a potent sedative. It inhibits enzyme induced breakdown of GABA in the brain resulting in sedation. This might be probable reason for significant improvement in the sign and symptoms of the patient. Results from behavioural tests revealed that an extract from the drug exhibited significant antidepressant activity. Alcoholic extract of

the root of the drug on norepinephrine, dopamine, serotonin, gamma-amino butyric acid (GABA) on male albino wistar rats. A significant increase in the level of GABA was observed. The promotion of sleep is regulated by number of neurotransmitter primary among them is GABA. Major inhibitory neurotransmitter in the brain. The majority of cells are inhibited by GABA. An increase in its function reduces arousal and produces sleep. Most drugs used in insomnia act by increasing the effect of GABA. GABA controls the state of neuronal excitability in all brain areas. The balance between excitatory inputs (mostly glutamatergic) and inhibitory GABAergic activity determines neural activity. If the balance swings in favour of GABA, then sedation, amnesia and relaxation and anxiety are reduced. Reduction in GABAergic activity (or increase in glutamate) elicits arousal, anxiety, insomnia. When GABA binds with the GABA receptor the permeability of the central pore of the receptor complex opens, so allow more chloride ions into the neurone and decreases excitability. Valeronone act like a benzodiazepines, which bind to another receptor on the complex and enhances the effectiveness of GABA.

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