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Research Article

Evaluation of Efficacy of Herbokam Plus Capsules in the Patients with Stress Induced Insomnia: A Randomized, Placebo Controlled Study

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Abstract

Insomnia is highly prevalent and affects approximately 30% of the general population. Insomnia impairs cognitive and physical functioning and is associated with a wide range of impaired daytime functions across a number of emotional, social, and physical domains. Primary insomnia refers to insomnia caused by any known physical or mental condition, whereas secondary insomnia is caused by a medical condition. Due to its chronicity, insomnia is associated with substantial impairments in an individual's quality of life. It is possible that insomnia represents a significant risk of developing subsequent psychiatric disorder. Modern hypnotic's therapy has several side effects like developing addiction, daytime fatigue, drowsiness etc. Herbokam plus is a herbal preparation with herbs having proven adaptogenic, stress relieving and sedative properties. Current placebo controlled study is designed to check its efficacy against stress induced insomnia in which 58 patients in both groups were evaluated for four week duration with a dose of two capsules at bed time. After four week treatment significant results were observed in Herbokam group (group A) which has extremely significant difference when compared with placebo group. (Group B). About 86.44% relief was observed in insomnia, 87.5% in sleep latency and 78.97% in tendency of dreaming. Outcome of the study reveals an identical therapeutic efficacy of Herbokam plus capsules in stress induced insomnia.

Key Words: Insomnia, adaptogenic, psychiatric, sedative-hypnotic, anxiety

Introduction

In the early 1980s, insomnia was thought to be a symptom, not a disorder. After two decades or more of sleep research and sleep medicine, insomnia is considered a distinct nosological entity. Insomnia is the sensation of daytime fatigue and impaired performance caused by insufficient sleep. In general people with insomnia experience an inability to sleep despite being tired, a light and fitful sleep that leaves them fatigued upon awakening, or waking up too early The world health organization defines insomnia as a problem initiating and/or maintaining sleep or the complaint of non-restorative sleep that occurs on at least three nights a week and is associated with daytime distress or impairment.

Stress induced alterations in sleep have been linked to the development of post-traumatic stress disorders and sleep complaints and disturbances in arousal are continuing symptoms in patients. In many instances, insomnia is assumed to be secondary to another primary medical, psychiatric, or sleep disorder. However, specific cause and effect pathways have not yet been demonstrated. Hypnotic agents are primarily indicated for the treatment of transient sleep disruption such as those caused by jet lag, shift work or acute stress but are also used in selected persons with chronic insomnia (ideally for primary insomnia that failed to respond to behavioral therapy, or secondary insomnia that did not improve with treatment of the underline condition). Until quite recently, no hypnotic medications have been approved by the U.S. food and drug administration (FDA) for such long term use. Most cases of insomnia are treated with sedative-hypnotic drugs such as barbiturates and the benzodiazepines. Prescription sleeping pills induce an unnatural sleep which is not necessarily restful. Consequently, the use of hypnotics may leave you feeling more tired than before, which may prompt an increased dosage of the drug.

A Herbokam Plus capsule is a balanced blend of Ashwagandha, Jatamansi and Brahmi that help to combat restlessness and stress. They help in fighting stress naturally and maintain a healthy nervous system. They are natural adaptogen and help support a person's natural physical and mental ability to fight daily stress. This is an ideal formula for anxiety, stress, depression and tiredness.

Composition

Each capsule contains extracts from Ashwagandha (*Withania somnifera*), Brahmi (*Bacopa monnieri*), and Jatamansi (*Nardostychys jatamansi*).

Materials & Methods:

This was a prospective, randomized, placebo controlled study involving patients with Stress induced insomnia. Patient were randomized in two groups and have received a single treatment of either investigational product (Herbokam plus) or a Placebo capsule. The goal was to enroll approximately 125 patients in order of 50 patients complete the trial in each group and provide data for analysis.

Study was carried out in O.P.D. of Dr. Shailesh Malekar (*Shree Bramhachaitnya Ayurved Chikitsalay, Karad*);

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study period was March 2009 to July 2010. Prior approval from independent ethical committee was taken.

Inclusion & Exclusion Criteria

Inclusion criteria: - Patient aged between 18-70 years; having confirmed diagnosis of Stress induced Insomnia with subjective total sleep time (TST) of 3 hours, sleep onset latency of > 30 min. and willing to comply with the protocol and ready to sign informed consent form are selected for the study.

Exclusion criteria: - Subject been in more than 2 studies in the past 2 years. Active suicidal ideation or active psychosis, chronic alcoholics, active malignancy, autoimmune condition, active involvement in any psychotherapy or need of immediate psychiatric or medical care were excluded from the study.

Study Procedure

Each patient was advised to take two capsules of either Herbokam plus or Placebo at bed time. Patients were examined on the Week 1, Week 2, Week 3 and Week 4 study visits, thereafter until 100% resolution of signs and symptoms. At each study visit symptom score assessment was done and patient was observed for any adverse reactions etc.

Efficacy Parameters:-

Efficacy parameters are shown in **Table 1**

Table 1: Assessment criteria

Symptom	Scoring
Insomnia	
Absent (> 6 to 7 hour sleep	0
Mild (4 to 5 hours sleep)	1
Moderate (2 to 3 hours sleep)	2
Severe (Less than 2 hours)	3
Sleep latency	
Absent (< 30 minutes)	0
Mild (30 minutes to 1 hour)	1
Moderate (1 hour to 1 and half hour)	2
Severe (More than one and half hour)	3
Tendancy of dreaming	
Absent (no dreams)	0
Mild(1 or 2 dreams at night, < 3 times/week with no disturbance in sleep)	1
Moderate (4 to 5 dreams at night, 3 to5 times in a week with mild disturbance in sleep)	2
Severe (> 5 dreams in a night and almost every day of the week with severely disturbed sleep)	3

All adverse events reported or observed by patients were recorded with information about severity, date of onset, duration and action taken regarding the study drug. Patients were allowed to voluntarily withdraw from the study, if they had experienced serious discomfort during the study or sustained serious clinical events requiring specific treatment. For patients withdrawing from the study, efforts were made to confirm the reason for withdrawing.

Statistical Analysis

Statistical analysis was done using paired "t" test for assessment of improvement in each group, and unpaired "t" test was used for the comparison of improvement between two groups. In the entire test the criteria for statistical significance was $p<0.05$. Descriptive statistics are presented for all measurements of efficacy. Categorical data are summarized and presented using frequency tables of counts, histograms, and percentages. Continuous variables are summarized and presented as means, standard deviation, medians, and ranges.

Results and Discussion

About 146 patients were screened for the trial from which 130 patients were enrolled in the study. From the total enrolled patients 116 patients (58 in each group) completed the 4 weeks treatment period, remaining patients discontinued the study.

In table 2 to 4 statistical analysis of both the groups are shown and in figure 1 to 3 comparison of the effect of therapy is shown. In group A (Herbokam plus) patients, mean score of insomnia was 2.36 initially which came down to 0.32 after treatment exhibiting a statistically extremely significant improvement with p value of <0.0001 and about 86.44% relief, where as in group B (Placebo) it doesn't show any significant improvement with reduction in the mean score from 2.241 before treatment to 2.02 after treatment with insignificant p value of 0.014 with 9.99% relief. When compared with unpaired "t" test extremely significant difference was observed between two groups. In case of sleep latency the mean score of group A patients came down from 1.6 to 0.2 with extremely significant improvement with p value of <0.0001 and with 87.5% relief, where as in group B it doesn't show any significant improvement with reduction in mean score from 1.544 to 1.52 with p value of 0.419 and with 1.74% relief. When compared with unpaired "t" test extremely significant difference was observed between two groups. In case of tendency of dreaming 78.97% relief was observed in group A and 7.4% in group B, this improvement when compared with unpaired "t" test was extremely significant between two groups.

In short when the overall assessment was performed, group A shows remarkable difference in all the symptoms compared to group B, which means that Herbokam plus capsule is highly effective in managing the symptoms of stress induced insomnia.

Discussion:

Nowadays a high percentage of the population in modern society suffers from various kinds of sleep disturbances, due to the impact of increased physiological and socio-cultural stress factors [8]. Patients with insomnia often have symptoms that include tension, anxiety, depression, fatigue, and irritability [9-11]. Frequently insomnia begins in conjunction with significant stress [12]. When insomnia is longstanding with little apparent relationship to immediate physical or psychological occurrences, this is called primary insomnia. If insomnia is due to pain, anxiety, or depression, this is called secondary insomnia [13]. Since insomnia has many causes, the indications for treatment are dependent on the etiology [14]. Treatment of insomnia is divided into first- and second-line treatments [15]. Generally antidepressants from all four classes are being used for the treatment of several stress disorders [16]. The most common side effects of the antidepressants are headache, nausea, anxiety, loss of appetite, dry mouth etc [17]. There is a category of herbs called Adaptogens that help the human body adapt to stress, support normal metabolic processes and restore balance, they increases body's resistance to physical, biological, emotional and environmental stressors and promote normal physiological function [18]. Adaptogens have a direct effect on nervous system health. They enhance mood and relieve stress [19]. Though variety of herbs are used for treating insomnia, but all we agree that the most efficacious in treating varying symptoms of stress is the herb, Ashwagandha (*Withania somnifera*) sometimes known as Indian ginseng [20]. Ashwangdha is a calming adaptogen. It enhances endocrine functions, especially helping to re-regulate the thyroid, testes and adrenal glands. Because of its nervine and adaptogenic functions, Ashwangdha is very effective for anxiety, fatigue, cloudy thinking, stress induced insomnia and neurasthenia (nervous exhaustion) [21]. It exhibits antioxidant effects in the brain and tranquilizing effects on the central nervous system in animals, possibly by influencing GABA receptor function [22]. Bramhi (*Bacopa monnieri*) also is a nervine, mild anticonvulsive, antispasmodic and antioxidant. It has a very long history of use in Ayurveda and Siddha medicine as a rasayana. It is used to promote memory and focus, relieve anxiety [23]. Jatamansi (*Nardostatus jatamansi*) is used as a bitter tonic, antiseptic and for treatment of epilepsy and hysteria. It is also used for insomnia and exhibit negative inotropic and chronotropic effects [24]. Current study of Herbokam plus capsule shows extremely significant results in symptoms of stress induced insomnia without producing any adverse events which means Herbokam plus is a effective remedy to control Insomnia and allied symptoms. Because of that, people need not to go for hypnotic's therapy, which can produce habits and have several side effects.

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Table 1: Demographic data of the patients

	Sex M/F	Mean age	18yr-30yr	31yr-40yr	41yr-50yr	51yr-60yr	61yr-70yr.
Group A	28/30	38.72	10	14	11	11	12
Group B	33/25	41.55	6	10	15	13	14

Table 2: Effect of therapy in patients of group A

Parameters	Mean scores BT	Mean scores AT	Mean (diff)	%relief	SD	SEM	"t"	*p value*
Insomnia	2.36	0.32	2.034	86.44	0.47	0.06	23.91	<0.0001
Sleep latency	1.6	0.2	1.397	87.5	0.408	0.05	13.8	<0.0001
Tendancy of dreaming	1.189	0.25	0.931	78.97	0.44	0.058	8.956	<0.0001

Table 3: Effect of therapy in patients of group B

Parameters	Mean scores BT	Mean scores AT	Mean (diff)	%relief	SD	SEM	"t"	*p value*
Insomnia	2.241	2.017	0.22	9.99	0.73	0.09	2.52	0.014
Sleep latency	1.544	1.517	0.03	1.74	0.599	0.078	0.814	0.419
Tendancy of dreaming	1.08	1	0.08	7.4	0.74	0.09	2.319	0.024

Table 4: Comparison of effect of treatment in both group by unpaired "t" test

Parameters	Group A Mean+/-SEM	Group B Mean+/-SEM	"t"	*p value*	Remark
Insomnia	2.034 +/- 0.06	0.22 +/- 0.09	16.77	<0.0001	extreemely significant.
Sleep latency	1.397 +/- 0.771	0.03 +/- 0.078	14.754	<0.0001	extreemely significant.
Tendancy of dreaming	0.931 +/- 0.058	0.08 +/- 0.09	7.948	<0.0001	extreemely significant.