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A BRIEF REVIEW OF THE EFFICACY OF AYURVEDIC THERAPEUTICS IN TREATING ANXIETY DISORDERS

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ABSTRACT

We all experience anxiety; it is a natural human state and a vital part of our lives. Anxiety helps us to recognize and respond to danger in 'fight or flight mode. The 'right' amount of anxiety can help us perform better and stimulate action and creativity. But persistent anxiety causes real emotional distress and can make us sick. Sometimes such a person may develop anxiety disorders such as panic attacks, phobias, obsessional behaviors, etc. Anxiety at this level can have a truly distressing and debilitating impact not only on our lives but also on our physical as well as mental health. Anxiety disorders are the most prevalent psychiatric disorders with a current worldwide prevalence of 7.3% [4.8%-10.9%]. Among them, specific phobias are the most common, with a prevalence of 10.3%. Panic disorder (with or without agoraphobia) is the next most common with a prevalence of 6.0%, followed by social phobia (2.7%) and generalized anxiety disorder (2.2%). Generally speaking, women are more prone to develop emotional disorders with an onset at adolescence; they are 1.5 to 2 times more likely than men to have an anxiety disorder. According to the research, anxiety influences attention, learning, cognitive processes, information processing, and academic performance or work capacity. Despite various anxiolytic medicines and the use of various therapies like behavioral, and cognitive behavioral therapy, the problem of anxiety disorders is increasing day by day. Though anxiolytic medicines are not less than any wonder remedies, we cannot neglect their various hazardous

side effects such as constipation, dryness, drug dependency, etc. This article is aimed at reviewing the efficacy of various Ayurvedic therapeutics while dealing with anxiety.

Keywords: Anxiety, Ayurveda, Holistic Science, Yoga

INTRODUCTION

The 21st century is the century of SADD syndrome, i.e. Stress, Anxiety, Depression, and Diseases[1]. According to one research article published in The Lancet Psychiatry (Feb. 2020), 197·3 million Indians had mental disorders in 2017, including 45·7 million (42·4–49·8) with depressive disorders and 44·9 million (41·2–48·9) with anxiety disorders[2]. Stress is referring to the physiological responses caused by any stressful event (stressor). Some amount of stress is required for the work to get done. In 1974, Selye introduced the concept of eustress; the positive stress required for any work to get done. Eustress is the "good stress" that is associated with positive feelings and health benefits[3]. Stress is a survival mechanism. So, when we experience stress for a long time, our body doesn't adapt to it, it causes anxiety. Anxiety also leads to a flight or fight response. Every one in four Indians suffers from anxiety. Stress is typically caused by an external trigger. The trigger can be short-term, such as a work deadline or a fight with a loved one, or long-term, such as being unable to work, discrimination, or chronic illness. People under stress experience mental and physical symptoms, such as irritability, anger, fatigue, muscle pain, digestive troubles, and difficulty sleeping. Anxiety, on the other hand, is defined by persistent, excessive worries that don't go away even in the absence of a stressor. Anxiety leads to a nearly identical set of symptoms as stress: insomnia, difficulty concentrating, fatigue, muscle tension, and irritability[4]. According to the research, anxiety influences attention, learning, cognitive processes, information processing, and academic performance or the work capacity [5].

Anxiety Definition

As per the American psychological association, anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure. Once manifested, it may persist for a longer duration irrespective of the presence or absence of stressor[6]. In DSM-5 (Diagnostic and Statistical Manual of Mental Disorders), anxiety (French: anxiété; German: Angst) is defined as the anticipation of a future threat; it is distinguished from fear (peur; Furcht), the emotional response to real or perceived imminent threat[7].

Manifestation of Anxiety -

Anxiety is the result of constant communication between several different brain regions. No one brain region drives anxiety on its own. Instead, interactions among many brain areas are all important to understand how we experience anxiety. One potential explanation for how this works splits the brain into two parts: a cognitive brain and an emotional brain.

Cognitive brain- The frontal lobe, where all of our sensations and thoughts come together as one unified experience, is the cognitive brain.

Emotional brain- The amygdala, located deep inside the brain, is part of the emotional brain. According to this theory, we only feel anxiety when signals from the emotional brain overpower the cognitive brain. A region in the frontal lobe called the dorsal anterior cingulate cortex (dACC), amplifies fearful signals coming from the amygdala. On the other hand, the ventromedial prefrontal cortex (a part of the frontal lobe), seems to reduce the signals coming from the amygdala[8].

Anxiety Types-

Experts generally recognize six major types of anxiety: generalized anxiety disorder, social anxiety disorder, separation anxiety, panic, and phobias, further distinguishing agoraphobia as an anxiety disorder in its own right. Humans are social creatures, wired to thrive on approval and acceptance by others. Social anxiety/phobias are characterized by a marked and persistent fear of social or performance situations in which

embarrassment may occur. Test anxiety is a type of social/performance anxiety; a feeling someone might have in a situation where performance counts[9]. Anxiety is considered excessive or pathological when it arises in the absence of challenge or stress, when it is out of proportion to the challenge or stress in duration or severity when it results in significant distress, and when it results in psychological, social, occupational, biological, and other impairment. Neurotic disorders are related to stress, reaction to stress (usually maladaptive), and temperament[10].

Mental health, Mental illness, and Ayurveda

Mental Health refers to the psychological and emotional well-being of a person. Being mentally healthy generally means that a person can use his/her emotional capabilities to function well in society and go through everyday life with little or no difficulty. Some factors that can affect our mental health are our family life, social life, and work life. Having negative experiences in any of the above-said areas can deteriorate the condition of our mental health. Mental illnesses, on the other hand, refer to health-related conditions where a person's mood or thinking affects his ability to work well or relate to other people. These can be classified as anxiety disorders, schizophrenia, mood disorders, eating disorders, personality disorders, etc. Mental illness causes several diseases even to the physical body. Different types of modern medicines are available to treat mental illness, but these medicines have different types of side effects. Hence today's modern society also turns back toward traditional methods of cure of mental health.

Sadvritta and Aachar Rasayana- Ayurveda offers some code of good conduct under the heading of Sadvritta and Aachar Rasayana. The manners under Sadvritta and Aachar Rasayana can be categorized into personal (early sleeping and awakening, avoiding excessive exertion, avoiding suppression of natural urges, etc.), social (being merciful, telling truth, avoiding alcoholic beverages, being soft-hearted, always using clean and washcloths), psychological and emotional (try to maintain a steady mental state i.e. avoid the height of emotions, keep patience, try to avoid recalling distressing past experiences such as being insulted by someone, etc.) Such a type of lifestyle adaptation is always helpful in the prevention and management of a wide range of mental disturbances including stress and anxiety[11].

Aim and Objectives/Need of Study-

Anxiety disorders are the most prevalent psychiatric disorders with a current worldwide prevalence of 7.3% [4.8%-10.9%] [12]. Picture a bell curve with extreme anxiety on the far right and an extreme lack of anxiety on the far left. If you're too anxious to the point where it's physically and mentally debilitating, then your performance suffers. If you're not anxious enough, if you're not engaged and slightly activated by anxiety, as it were, then your performance also suffers[13]. There is a high comorbidity between anxiety (especially generalized anxiety disorders or panic disorders) and depressive disorders. Additionally, anxiety disorders are often associated, which renders treatment even more complex for non-specialists. As a result, anxiety disorders often remain underdiagnosed and undertreated in primary care[14]. Despite various anxiolytic medicines and the use of various therapies like behavioral, and cognitive behavioral therapy, the problem of anxiety disorders is increasing day by day. Though anxiolytic medicines are no less than any wonder remedies, we cannot neglect their various physical side effects including confusion, dizziness, and drug dependency. Hence there is a need for proper therapeutics to deal with anxiety in general.

Material and Methods-

This article is based on a review of current research regarding the efficacy of Ayurvedic therapeutics in treating anxiety. Materials related to anxiety and other relevant topics have been collected. We also have referred to modern medicine and explored various websites to collect information on the relevant topic. Recent original research articles published in reputed journals have also been reviewed while writing this article.

Current research/Literature Review-

Over the last few decades, various research projects are carried out to assess the efficacy of Ayurvedic therapeutics in treating anxiety in different researchers across the country. Some of them are as follows-

1. One research has been performed by Sakina R. et al, entitled, 'Anxiolytic actions of Nardostachys Jatamansi via GABA benzodiazepine channel complex mechanism and its biodistribution studies'. In this study, they found that 7-day treatment with Nardostachys jatamansi extract (NJE) produced significant anxiolytic effects in mice and also a significant increase in brain monoamine and GABA neurotransmitter levels and suggests that anxiolytic effects of NJE are primarily and plausibly mediated by activating GABAergic receptor complex[15].
2. Another Clinical trial by Langade D. et al has been performed to evaluate the efficacy and Safety of Ashwagandha (Withania somnifera) Root Extract in Insomnia and Anxiety. It is a Double-blind, Randomized, Placebo-controlled Study. In this study total of 60 patients were randomly divided into two groups: test (n = 40) and placebo (n = 20) in a randomization ratio of 2:1. The test product was a capsule containing the highest concentration of full-spectrum Ashwagandha root extract 300 mg, and the placebo was an identical capsule containing starch. Both treatments were given twice daily with milk or water for 10 weeks.

Sleep actigraphy (Respironics Philips) was used for the assessment of sleep onset latency (SOL), total sleep time (TST), sleep efficiency (SE), and wake after sleep onset (WASO). Other assessments were total time in bed (sleep log), mental alertness on rising, sleep quality, Pittsburgh Sleep Quality Index (PSQI), and Hamilton Anxiety Rating Scale (HAM-A) scales. **Results** - Two patients, one from each group, did not complete the study and the per-protocol dataset (n = 58) included 29 and 19 patients from the test and placebo, respectively. Significant improvement in sleep quality was observed with the test compared to the placebo (p, 0.002) group. Significant improvement was observed in all other sleep parameters, i.e., SOL, SE, PSQI, and anxiety (HAM-A scores) with Ashwagandha root extract treatment for 10 weeks. Here researchers concluded that Ashwagandha root extract is a natural compound with sleep-inducing potential, well-tolerated, and improves sleep quality and sleep onset latency in patients with insomnia at a dose of 300 mg extract twice daily. It could be of potential use to improve sleep parameters in patients with insomnia and anxiety but need further large-scale studies[16].

3. A randomized controlled study has been performed by Basavaraj RT, et al, to evaluate the clinical efficacy of Manasamitra Vataka (an Ayurveda medication) on generalized anxiety disorder with comorbid generalized social phobia. This is the first study conducted on the efficacy of Manasamitra Vataka in anxiety disorders. In this study, seventy-two (72) patients participated with a generalized anxiety disorder (GAD) with comorbid social phobia and who were between the ages of 20 and 55 of either sex. They were randomly divided into three treatment groups: Group 1 (n=24) and Group II (n=24) received Manasamitra Vataka tablets (100 mg twice daily for 30 days). Group II, in addition to Manasamitra Vataka, underwent Shirodhara (therapy involving dripping of medicated oil [Brahmi Tail] over the forehead) treatment for the first 7 days. Group III (n=24) received clonazepam 0.75 mg daily in a divided dose for 30 days. The assessment of the study was done using the Hamilton Anxiety Rating Scale, Beck Anxiety Inventory, Beck Depression Inventory, Epworth Sleepiness Scale (ESS), World Health Organization Quality of Life BREF, and Clinical Global Impression scales (Improvement and Efficacy). **Results:** Patients from all the groups showed a significant reduction in clinical parameters evaluated. However, improvement in ESS was observed only in Group II. The treatment outcome was comparable between the three groups. The results suggest that Manasamitra Vataka is effective in the management of GAD with comorbid generalized social phobia. The Add-on effect of Shirodhara reduced daytime sleepiness[17].
4. Bacopa monnieri (BM) is widely used in ayurvedic medicine to improve memory functions. Its an-

xiolytic property was investigated in a study entitled, 'Bacopa monnieri alleviates aluminum chloride-induced anxiety by regulating plasma corticosterone level in Wistar rats, conducted by Murugaiyan SM et al.

In this animal study, they found that Bacopa monnieri has a potential role in reverting the anxiogenic effect of AlCl3 in the amygdala as is evident from the plasma corticosterone levels and the EPM parameters of different groups under study [18].

5. Intermittent fasting-dietary restriction (IF-DR) is an increasingly popular intervention to promote healthy aging and delay age-associated decline in brain functions. One interesting study has been performed by Singh H et al, entitled, 'Intermittent fasting combined with supplementation with Ayurvedic herbs reduces anxiety in middle-aged female rats by anti-inflammatory pathways'.

   The present study aimed to investigate the synergistic effects of the IF-DR regimen with herbal supplementation containing dried leaf powder of Withania somnifera and dried stem powder of Tinospora cordifolia on anxiety-like behavior and neuro-inflammation in middle-aged female rats. Their data demonstrated that DRH (Dietary restriction with herbal medication) regimen reduced anxiety-like behaviour in middle-aged female rats and associated neuro-inflammation by ameliorating key inflammatory cytokines and modulated stress response[19].
6. Galani VJ and colleagues have conducted a project titled, the effect of hydroalcoholic extract of Sphaeranthus indicus against experimentally induced anxiety, depression, and convulsions in rodents. Sphaeranthus indicus demonstrated statistically significant anxiolytic, central nervous depressant, and anticonvulsant activities in rodents, thus supporting the folk medicinal use of this plant in nervous disorders[20].
7. In a study entitled, 'Protective effect of BR-16A (Mentat), a herbal preparation on alcohol abstinence-induced anxiety and convulsions.

   Mentat (BR-16A) is an herbal amalgam of various ingredients, the chief herbs in the Mentat are Brahmi (Bacopa monnieri), Ashwagandha (Withania somnifera), Mandookaparni (Centella asiatica), Jatamansi (Nardostachys jatamansi), Tagar (Valeriana wallichi), Shankhapuspi (Evolvulus alsinoides), Vacha (Acorus calamus), Malkangni (Celastrus paniculatus), Guduchi (Tinospora cordifolia), Kuth (Saussurea lappa), Terminalia chebula, Amla (Embelica officinalis) and Terminalia belerica. Among these B. monnieri, W. somnifera, C. asiatica, N. jatamansi, V. wallichi, E. alsinoides, A. calamus, C. paniculatus, and T. cordifolia have been categorized in Ayurveda as Medharasayanas and asserts to enhance intellect and memory. In the above study, researchers found that both acute and chronic administration of BR-16A (100 mg/kg) exhibited significant protection against ethanol withdrawal-induced reduction in the PTZ threshold in rats and mice. The results suggest the usefulness of this safe herbal psychotropic preparation in the management of ethanol withdrawal anxiogenic reactions[21].
8. G Kirkwood et al, in their reviews article, 'Yoga for anxiety: a systematic review of the research evidence, stated that Yoga is an attractive therapeutic option for anxiety disorders because of its popularity. The National Institute for Clinical Excellence (NICE) recommends that patients with panic disorder and generalized anxiety disorder are informed about exercise as part of good general health[22, 23]. The author also emphasized the need for good quality studies.
9. Yoga is defined as a practice consisting of three components: gentle stretching; exercises for breath control; and meditation as a mind-body intervention[24]. The version used mainly in the West is hatha yoga, which consists of an integration of asana (postures), pranayama (breathing exercise), and meditation[25]. Berger and Owen compared the effects of swimming, fencing, body conditioning, and yoga classes and found that only the yoga treatment group recorded a significant short-term reduction in state anxiety[26].

CONCLUSION

The knowledge of medicine is a prime factor for successful medical practice. For overall well-being and issues related to anxiety, rational use of natural products and therapies is gaining popularity. Above mentioned studies will ultimately boost the use of Ayurvedic therapeutics due to an array of scientific proof in its favor. Proper medication as per Ayurvedic guidelines along with proper Aahar, Vihar, and Yoga will regulate anxiety without any untoward effects. Aahar (food) is an essential requirement of life and one can attain good health by following proper eating habits and consuming Satvik Aahar. Food when used properly helps us to live a healthier life. Consumption of Satvik Aahar affects mood and health. It helps in attaining a calm state of mind which helps in dealing with anxiety[27]. From various researches on anxiety carried out at different institutions among different population groups, it is clear that Ayurvedic therapeutics (which includes Sadvritta, Aachara Rasayana, Aahar, Yoga, different Karmas, and medicines) have a lot of potentials if used judiciously.

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