

## EFFICIENCY STUDY OF FORTIFIED *MANDOOKAPARNI CHOORNA* IN THE MANAGEMENT OF *CHITTODVEGA* (GENERALIZED ANXIETY DISORDER)

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### ABSTRACT

Generalized Anxiety Disorder (GAD) is what many people experience in day to day life, interferes with the ability to participate in relationship careers and other aspects of life. As the anxiety disorders are increasing in the general population it is the need of the hour to have a cost-effective, addiction free drug for their management. In this regard, to evaluate the effect of fortified *Mandookaparni choorna* in the management of *Chittodvega* (GAD), 33 patients were selected from OPD and IPD of SDM College of Ayurveda and Hospital, Hassan fulfilling the inclusion criteria. Among them 30 patients completed the treatment and 3 were dropouts. They were administered 2g of fortified *Mandookaparni choorna* 3 times a day, after food with warm water for one month. The study showed that 43.31% relief in anxious mood and 31% relief in autonomic symptoms which is statistically highly significant  $P < 0.001$ . 39.5% relief in fear symptoms which is statistically highly significant. 17.4% in somatic sensory symptoms which is statistically non significant. 33.5% relief in tension which is statistically highly significant  $P < 0.001$ . 38.8% relief in insomnia which is statistically highly significant  $P < 0.001$  after 30 days of treatment. Overall effects provided by fortified *Mandookaparni* showed that there was no complete and marked improvement in any of the patients. Moderate improvement was seen in 13.3% of the patients and mild improvement in 70% of the patients after the completion of 30 days of treatment. The results prove the efficacy of Fortified *Mandookaparni choorna* in the signs and symptoms of anxiety.

**Keywords:** *Chittodvega*, *Mandookaparni*, Generalized anxiety disorder

### INTRODUCTION

*Chittodvega*<sup>1</sup> is one of the mental disorder mentioned in Ayurvedic literature in which affliction of mind by anxiety, fear and agitation are seen. *Anavasthita Chittatva* has been mentioned as one of the disorder caused by vata, which is the main feature of *Chittodvega*. By considering the different meanings of the word *Udvega* it can be said that *Chittodvega* is a state in which features of Generalized Anxiety Disorder are seen. *Medhya* drugs mentioned in our classics have an effective ac-

tion over mind and have the property of reducing anxiety and promote mental health. *Mandookaparni* is one among the *medhya rasayana* mentioned by *Charaka*. As the anxiety disorders are increasing in the general population it is the need of the hour to have a cost-effective, addiction free drug for their management. In this regard it is planned to study the effect of fortified *Mandookaparni choorna* in the management of *Chittodvega* (Generalized Anxiety Disorder). Fortification of the *Mandookaparni choorna* is done by giving

Bhavana with Mandookaparni kashaya. According to Rasatarangini the process of fortification will augments the potency of the Medicine<sup>2</sup>. So in order to improve the potency of the medicine it is planned to give fortification to the Mandookaparni choorna.

## MATERIAL AND METHODS

The following criteria of DSMIV was taken into consideration to the final diagnosis<sup>3</sup>

A. Psychological arousal: 1. Fearful Anticipation 2. Irritability 3. Anger 4. Disturbed Sleep

B. Autonomic arousal: 1. Excessive Sweating 2. Trachycardia 3. Trachypnoea 4. Dry Mouth

C. Restlessness D. Muscle tension. Mild generalized anxiety disorder episode > at least 2 of A and atleast 2 of B and C, D.

**Inclusion criteria:** 1. Mild GAD for More than 6 months; 2. Patients between age group of 20 to 50 years of age irrespective of sex.

**Exclusion criteria:** GAD associated with other disorders like neurological disorders, systemic conditions, endocrine disorders, deficiency states, toxic conditions and idiopathic psychiatric disorders.

**Plan to study the effect of treatment:** 33 patients of GAD fulfilling the inclusion criteria were selected for the study. They were administered 2g of fortified Mandookaparni choorna 3 times a day, after food with warm water for 1 month. Fortified Mandookaparni choorna was prepared by giving seven bhavanas to the Mandookaparni choornam with Mandookaparni kashaya.

**Assessment criteria:** The result of the treatment was evaluated as to the degree of anxiety according to Hamilton anxiety rating scale.

## OBSERVATIONS

All the patients in this study were between the age of 20 and 50 years. The maximum numbers of patients (37%) were in the age group of 26-30 years and the least number of patients (6%) were in 38-43 years of age group. In this study maximum number of patients was male i.e. 69.7% and 30.3% of patients were female. In this study more number of patients was of Hindus 93.9% and 6% were muslims and Christians. Consideration of marital status of the patients showed that 48.5% were married and 51.5% were unmarried. It is evident from the study that maximum no. of patients 60.6% were graduates, 27.3% PUC, 13.1% were middle school and primary. In this study maximum no. of patients 42.4% were Students, 24.2% business men 12.1% were teachers 18.2% were agriculturists and house wives. Out of 33 patients 48.5% had *samagni*, 33.3% patients had *vishamagni*, and 18.2% possessed *Tikshnagni*. In case of *Koshta*, 75.8% had *Madhyama Koshta*. 6% had *Krura Koshta* and 18.2% had *Mrdu Koshta*. In this study 66.7% patients had *Madhyama Satva* and 33.3% had *Avara Satva*. Maximum no. of patients was graded as *Madhyama Satmya* i.e. 97%. 3% *Avara Satmya* patients. Saririka Prakriti: In this study 63.6% Patients are *Vata Pittala Prakriti*. 21.2% Patients are of *Pitta Sleshmala Prakriti*. 15.2% are of *Vata Sleshmala Prakriti*. In this study 69.7% of the patients were of *Rajasika Prakriti*; 30.3% *Tamasika Prakriti*. 69.7% of the patients were of anxious personality, while 18.2% were of aggressive and the remaining 12.1% were of paranoid personality. 69.7% of the patients were of anxious personality, while 18.2% were of aggressive and the remaining 12.1% were of paranoid personality.

## RESULTS

This clinical study shows that 43.31% relief in anxious mood and 31% relief in autonomic symptoms which is statistically highly significant  $P < 0.001$ . 39.5% relief in fear symptoms which is statistically highly significant. 17.4% in somatic sensory symptoms which is statistically non significant. 33.5% relief in tension which is statistically highly significant  $P < 0.001$ . 38.8% relief in insomnia which is statistically highly significant  $P < 0.001$  after 30 days of treatment.

Overall effects provided by fortified *Mandookaparni choorna* showed that there was no complete and marked improvement in any of the patients, moderate improvement was seen in 13.3 % of the patients and mild improvement in 70% of the patients after the completion of 30 days of treatment. Based on the result obtained from the study, fortified *Mandookaparni Choorna* provides mild effect in majority of symptoms in generalized anxiety disorder.

## DISCUSSION

GAD generally first appears during adolescence, although many affected individuals refer that they have always suffered from this condition<sup>4</sup>. It also presents a high degree of co-morbidity with other anxiety disorders or mood disorders. The failure of successful adaptation during stressful situation results in stress related illness that result from, or are associated with, dysregulation of the stress response<sup>5</sup>. A group of plant based drugs, the adaptogens, appears to induce a state of nonspecific resistance, enabling the organism to counteract and adapt to various stressors that can adversely affect the physiological system. It has been documented that several plants have adaptogenic activity<sup>6</sup>. *Ayurveda* documented many such plants in-

cluding *Mandookaparni* which is categorized as *rasayana*<sup>7</sup>. The properties ascribed to *rasayanas* in *Ayurveda* are remarkably similar to those of adaptogens<sup>8</sup>. Adaptogens are believed to have bimodal action either by providing a stimulant effect or sedative effect depending on the needs of individual in a particular situation<sup>9</sup>.

*Mandookaparni* is having *Tikta*, *Kashaya* and *Madhura rasa*. *Tikta*, *Kashaya*, *Madhura rasa* are known to do the *Pitta shamana* and the *Madhura rasa* does the *vata shamana*. *Mandookaparni* is having *Medhya* action (improving brain functions) which in turn helps in the reduction of the anxiety symptoms.

Mild to moderate reduction in symptoms of GAD are seen in the patients may be due to following reasons:

**Anxious mood:** The component asiaticoside is an active triterpene substance which has role in anxiolytic activity as it increases GABA level in brain (Indian journal Biol 1992, 889-91). It may also have role in the reduction of fear and tension.

**Depressed mood:** Brahmoside component is responsible for sedative and antidepressant actions due to cholinomimetic effect (Journal of Stress Physiology & Biochemistry Vol. 7 No. 1 2011).

**Insomnia:** Reduction of sleeplessness may be due to sedative effect of brahmoside. Intellectual functions like concentration and memory are improved may be because of the *Medhya* effect of the *Mandookaparni choorna*.

The present clinical trial revealed that administration of Fortified *Mandookaparni choornam* regularly for one month reduced stress, attenuated anxiety, Negated depression and enhanced adjustments and attention in patients without any side effects like vertigo, nausea, and dizziness or mental weakness. These observations

clearly indicate that *Mandookaparni choorna* has potential action in the regulation of Hypothalamo-pituitary–adrenocortical axis (HPA axis) especially in stress related disorders. It appears that Fortified *Mandookaparni* may be a safer alternative to Benzodiazepines for the therapy of stress related clinical disorders.

#### CONCLUSION

Based on the result obtained from the study fortified *Mandookaparni choorna* provides mild effect in majority of symptoms in Generalized anxiety disorder. Hence it can be a treatment of choice in Anxiety Disorder. Phytochemical analysis and HPTLC study shows that the preparation is 100% genuine. The clinical study results prove the effect of *Mandookaparni choorna* as anxiolytic.

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