



ORIGINAL RESEARCH PAPER

Psychiatry

A STUDY ON “EFFECT OF SARASWATHA CHOORNAM IN CLINICAL DEPRESSION”

KEY WORDS: Depressive Illness, Kaphaja Unmada, Saraswatha Choornam

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ABSTRACT

Depression is a serious mental health concern that will touch most people's life directly or indirectly, affecting 350 million people world-wide. It is of major public health importance in terms of its prevalence, sufferings, dysfunction, morbidity and economic burden. The description of Major depressive illness is similar to Kaphaja unmada detailed in Ayurvedic classics. Many formulations also recommended for treating mental disorders but scientific evaluations are less to prove its efficacy. In the present study, clinical evaluation of the study drug – Saraswatha choornam was done in 17 patients suffering from depressive illness. The study was an open trial without control group and the study setting was OPD of Department of Kayachikitsa, Govt. Ayurveda College Hospital, Thiruvananthapuram. Patients were selected as per ICD-10 criteria with proper exclusion. Participants were administered Saraswatha choornam, 4 gm thrice daily before food with honey and ghee for a period of three months. Clinical assessment was done using Hamilton Rating Scale for Depression before and after the intervention. Results obtained were statistically analysed. Among various domains of HRSD significant changes were observed in symptoms like depressed mood, suicide, insomnia-early, middle & late, work & activities and somatic symptoms (general and gastro intestinal). There was significant reduction in HRSD total score with p value <0.05. In conclusion it can be stated that, study drug Saraswatha choornam is effective in reducing some major symptoms of depression and not effective in some other symptoms.

INTRODUCTION

Mental health is a major concern world-wide and is vital for the growth and productivity of every society to ensure a healthy and happy life. In the Science of Ayurveda, a man is said to be healthy only when he is endowed with *prasanna atma-indriya-mana*¹ (pleasant soul, senses & mind) despite body factors. Advising the practice of *Sadvrutta* (measures for good mental health) along with *dinacharya* itself reveals the importance of preserving mental health in Ayurveda.

Depression is an illness characterised by persistent sadness and loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities for at least two weeks. It is detailed under a major title, mood disorders.

As per global health estimates of WHO, over 300 million people are estimated to suffer from depression equivalent to 4.4% of world population. According to National Mental Health Survey 2015-2016, life time prevalence of Depression in India is estimated to be 5.25% among individuals aged above 18 years and the current prevalence was 2.68%. It is one of the leading causes of disease burden a well².

Symptoms of Depressive illness cannot be found exclusively under a single heading in Ayurvedic texts. Many of them are scattered among various references. When the features of Depressive illness are compared with Ayurvedic terminologies, many of them will resemble with *kaphaja unmada*, *adhija unmada* and *vishada*. Formulations explained in these contexts has been practicing widely for reducing signs and symptoms of depression with promising results, but many of them are not yet validated. Scientific evaluation of such classical formulations in terms of research is necessary in current scenario.

The present study aims at re-validation of one such formulation, 'Saraswatha choornam' mentioned in Unmada chikitsa prakarana of Bhaishajya Ratnavali³.

METHODOLOGY

Objective of the study

To evaluate the effect of “Saraswatha Choornam” in reducing signs and symptoms of clinical depression.

CLINICAL TRIAL

Title of study: Effect of *Saraswatha choornam* in clinical depression

Study design

Interventional study - pre & post test without control group

Study setting

OPD of Department of Kayachikitsa, Govt Ayurveda College Hospital Thiruvananthapuram

Study population :

An accessible population giving informed consent from the age group 20-60yrs with symptoms of depression screened through ICD 10 criteria.

Inclusion criteria :

- Clinically diagnosed cases of depressive illness based on ICD 10 criteria
- Both male and female in the age between 20-60yrs.

Exclusion criteria :

- Patients having depressive episodes with major psychotic symptoms.
- Patients under prolonged medication.
- Thyroid dysfunction.
- Drug abuse

Constituents of Saraswatha choornam

Name of the drug	Scientific name	Family	Proportion
Vacha	Acorus calamus	Araceae	11 parts
Kushta	Saussurea lappa	Asteraceae	1 part
Aswagandha	Withania somnifera	Solanaceae	1 part
Sanghupushpi	Clitorea ternatea	Convulvulaceae	1 part
Maricha	Piper nigrum	Piperaceae	1 part
Nagara	Zingiber officinale	Zingiberaceae	1 part
Pippali	Piper longum	Piperaceae	1 part

Ajamoda	Tachyspermum ammi	Apiaceae	1 part
Krishna jeerakam	Carum carvi	Apiaceae	1 part
Swethajeerakam	Cuminum cyminum	Apiaceae	1 part
Patha	Cyclea peltata	Menispermaceae	1 part
Saindhava	Potassium chloride		1 part
Brahmi	Bacopa moneri	Scrophularaceae	QS

Preparation of the study drug

The drugs except *saindhava* & *brahmi* were washed well, removed of impurities, dried in the sun and powdered. *Saindhava lavana* was powdered separately and mixed together. *Brahmi* was taken separately, washed well and juice extracted. Powdered drugs were triturated (Bhavana) in brahmi juice for 21 times, dried in sunshade and pulverised to yield fine powder.

Procedure

Participants satisfying inclusion and exclusion criteria were selected. Study was conducted in a single group for 3 months. The study drug Saraswatha Choorna was given to the subjects as powder form in air tight packets of 4g with date of administration labeled on it. Honey and plain ghee also dispensed in separate glass bottles. They were advised to take 4g medicine with 3 ml of honey and 5 ml ghee, thrice daily, half an hour before food for 90 days. 45 packets were given each time at an interval of 15 days. A total of 270 packets were given to the patient during study period.

OBSERVATION, ANALYSIS & INTERPRETATION

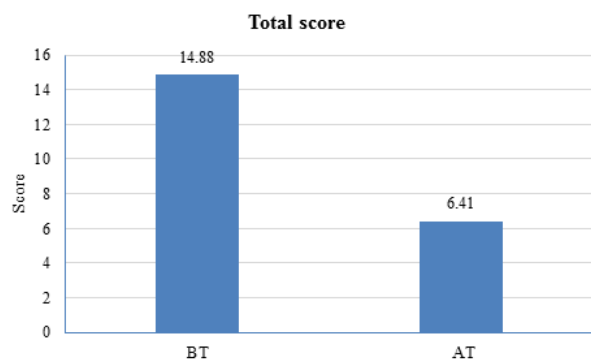
The symptoms of the patient were assessed and rated in scores of variables mentioned in Hamilton Rating Scale for Depression on 0th and 91st day. The results obtained were statistically analysed using Wilcoxon signed Rank test.

There was marked changes observed in parameters of HRSD: BT-AT ie, Depressed mood, Suicide, Insomnia- early, middle and late, Work & activities and Somatic symptoms –gastrointestinal and general. The observed changes were statistically significant with a p value <0.05.

No significant changes were noticed in feeling of guilt, retardation, agitation, anxiety and genital symptoms.

Response of treatment on Total score

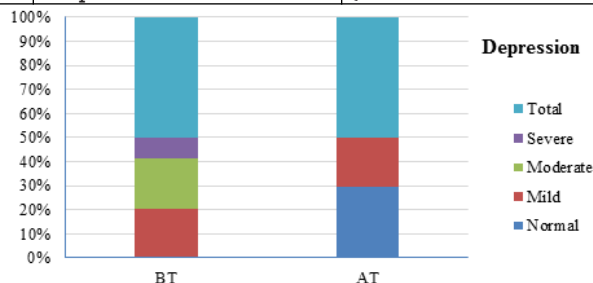
	Total score		Paired difference		Paired t test	
	mean	sd	mean	sd	t	p
BT	14.88	3.90	8.47	1.23	28.377	<0.001
AT	6.41	3.55				



Response of treatment according to severity of symptoms

Depression	BT		AT	
	N	%	N	%
Normal	0	0	10	58.8
Mild	7	41.2	7	41.2
Moderate	7	41.2	0	0
Severe	3	17.6	0	0
Total	17	100	17	100

Wilcoxon Signed Ranks Test z=3.758 p<0.001



While analysing the over-all response, the total score of HRSD changed from 14.88±3.90 to 6.41± 3.55 after treatment. The change was statistically significant with a p value < 0.05. Before trial 41.2 % subjects were present in both mild & moderate group and 17.6 % were in severe group. After treatment 58.8% patients became normal and 41.2% were changed to mild group. The change observed was statistically significant with a p value <0.05.

DISCUSSION

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. However, mental health remains a neglected part of global efforts to improve health. In current scenario, the impairment in mental health and prevalence of mental health disorders are increasing day by day. Depressive disorders are most common among them and it affects people of all ages from all walks of life⁴. It is ranked as the single largest contributor to non-fatal health loss and is projected to be the second leading cause of disease burden globally and third leading cause of disease burden in low-and middle-income countries.

Ayurveda emphasize the role of Manas in maintaining health very long ago. It stands for an interdependent relation between body and mind. Mind is influenced by the bodily factors like *doshas*, *agni*, *prakrti* etc. Any derangement in these leads to diseases and vice versa. While considering the psychopathology of depression in Ayurvedic point of view, a single disease encompassing its symptomatology cannot be pointed out. A probable correlation can be made with various references from classics such as *vishada*, *adhija*⁵ & *kaphaja unmada*. On analysis *vishada*⁵ can be correlated with mild depression and moderate and severe forms of depression resembles with that of *Kaphaja Unmada*⁷.

Relevance of drug selection

The drug chosen was *Saraswatha choornam*- a combination of 13 drugs.

- The formulation is *kaphavata samana*
- The core ingredients in this yoga are *medhya*⁸
- Various studies support the action of drugs in the yoga at neurotransmitter level and the formulation itself proved its antidepressant activity in animal models⁹.

Probable mode of action of Saraswatha choornam

When we scrutinize Clinical depression through the principles of Ayurveda, *Kaphaja unmada* is closest reference exhibiting similar clinical presentation. *Nidana* and *samprapthi* of *kaphaja unmada* occurs at the level of both *sareera* and *manas* hence it is considered as an *ubhayatmaka vyadhi*. *Agnimandya*, formation of *ama* and *rasa dushti* along with affliction of *manas* and *hridaya* are the key factors in pathogenesis. So the treatment is aimed to interrupt the process of *samprapthi* and normalising the *doshas*. The drugs which are *deepana* –*pachana* and having action on *manovaha srotas* should be very effective in such conditions.

The study drug *Saraswatha choornam* as a whole possesses *katu-tikta-kashaya rasa*, *laghu-tikshna guna*, *katu vipaka* and *kapha-vatahara* in action. The core ingredients- *vacha*, *sanghupushpi* and *brahmi* are having *medhya* and *rasayana* properties. Other constituents are proven for its *deepana-pachana karma* there by correcting *Aama* and *rasa dushti* inturn normalize *hridaya*. Honey and ghee are given as *anupana dravya* in which honey helps in increasing bioavailability of the drug through its *yogavahi*¹⁰ property and ghee helps the active principles to cross blood brain barrier.

CONCLUSION

In conclusion, administration of *Saraswatha choornam* showed significant improvement in symptoms like depressed mood, suicide, insomnia, work and activities, somatic symptoms and in total score of HRSD. No significant improvement noted in feeling of guilt, retardation, anxiety and genital symptoms. So, the drugs with *medhya* and *rasayana* properties have a potential role in managing psychiatric disorders in Ayurveda.

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